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Educational News and Editorial Comment

ENLARGEMENT OF THE BUREAU OF EDUCATION

While the agitation has been going on for a federal department of education, many school people have been of the mind that steps should not be taken to strengthen the Bureau of Education. The opinion seems to be accepted in some quarters that Congress will wake up some day to the importance of educational investigations and will eagerly desire to have these made by the federal government but that it would be a mistake to give Congress concrete examples of what a federal department might do by equipping the present Bureau of Education so that it may carry on its work more efficiently.

It is fortunate that the commissioner of education does not accept the curiously inconsistent position adopted by those who would keep down the Bureau of Education. He is working steadily toward the upbuilding of the Bureau. Recognizing the fact that statistics, in order to be reliable, must be carefully collected and checked, the commissioner persuaded the budget-making authorities to give him additional assistance. The funds secured have been used in the appointment of seven specialists and ten clerks during the last few months.

The commissioner is to be congratulated on his energy and success in developing the service of the Bureau of Education. This service is so important to the schools of the country that school people could advantageously devote some of the energy which is expended in shouting for the dead Sterling-Towner Bill in co-operating with the commissioner in his work. What possible advantage can come from continually carping about the meager equipment of the Bureau of Education? What possible harm can come to the hopes of school people for a federal department from a strengthened Bureau? If school people would show some professional solidarity in supporting the federal agency which they now have, it would doubtless be easier to persuade Congress that this agency ought to be expanded into a department.

Teachers and school officers could do much for the Bureau of Education if they would discuss its importance with their representatives in Congress.

COLLEGE ADMISSIONS IN KANSAS

After making a survey of the higher institutions of learning in Kansas, George F. Zook, specialist in higher education of the Bureau of Education, recommended that graduates of accredited high schools be no longer admitted automatically to the higher institutions. It was pointed out in support of this recommendation that in many cases the high-school student pursues series of courses adequate in number to satisfy college requirements, but the character of these courses is in no sense suitable to prepare for the lines of study upon which the student enters in the higher institution. A student who takes a series of commercial courses in the high school is not prepared to enter on the study of engineering. Even when the student has taken literary and scientific subjects, he may have elected so irregular a group that he will not be well prepared for a college sequence.

This general type of recommendation is rendered necessary, not only in Kansas, but in general, by the fact that legislatures very often pass laws requiring the higher institutions of a state to receive graduates of high schools without limitations of any kind. The result of such legislative control of education is to curtail the efficiency of the higher institutions. Even where there

is no legislation of the type referred to, the clamor of school men has often compelled state institutions to accept students who are inadequately prepared. It is well that attention be called vigorously, as Mr. Zook has done, to the necessity of a more equitable adjustment of the relations between various educational institutions.

CO-ORDINATING HIGH-SCHOOL AND COLLEGE COURSES

A published statement issuing from a committee of the American Chemical Society calls attention to a matter which is of wide general interest.

Conviction is growing among leaders in the American Chemical Society that radical reforms are necessary in the teaching of chemistry in the nation's high schools. Enormous waste of effort among teachers and pupils is said to exist, caused by lack of proper correlation of high-school and college chemistry.

For more than a year the society's Committee on Chemical Education has been studying the problem, and it will continue its inquiry, reporting at the spring meeting of the society, to be held in Washington, D.C., in April. Present conditions, the chairman of the committee, Professor Neil E. Gordon, of the University of Maryland, declares are holding back the cause of chemistry in this country.

Dr. John E. Teeple of New York City, treasurer of the society, is among those who advocate drastic changes. He believes that college credit for high-school work in chemistry should be eliminated. High-school courses, he thinks, should aim to give the student a broader understanding of the field of chemistry and of its utility to man rather than to impart what he calls the meager and uncertain knowledge necessary to meet college requirements.

Dean Henry P. Talbot of the Massachusetts Institute of Technology is another who favors readjustment. Harrison E. Howe of Washington, editor of the *Journal of Industrial and Engineering Chemistry*, the official journal of the society, is of the opinion that the industrial aspects of chemistry should be stressed by the high schools.

The society's committee finds that in the high schools the conditions regarding this subject range from no chemistry at all to a course which would compare favorably with the best college standards. Some schools are teaching agricultural chemistry; some household chemistry; some are giving a lecture course with no laboratory, and others offer a good fundamental course which would compare favorably with that given in college.

"A study of the college situation," Chairman Gordon said, "has shown that the colleges are using a great variety of ways of dealing with the problem. When the students come to their doors some colleges put them all in the same class, simply ignoring any high-school work. Some are making separate sections for those who have had high-school courses, while others make separate

sections for those who have passed the high-school chemistry course with the grade of A and another for those who have passed with the grade of B, and put the balance with those who have had no chemistry.

"This survey has made it evident that something can and should be done to try to improve these irregular conditions. Furthermore, it is evident that it must be done by a national association rather than by a state association, for a boy or girl receiving his or her high-school chemistry in New York may take his or her college work in California or in some other state."

Numerous suggestions are being received by the committee, not only from educators, but from industrial executives. One employer of industrial chemists said that there are only fifteen college chemistry teachers whose pupils he would employ. These men, he declared, have the gift of putting inspiration into their students. Another suggestion is that the system of marks be done away with.

What is true of chemistry is true also in other fields. The courses in history and English, in physics and biology, which are given in high schools frequently overlap college courses in the same subjects and are often too highly specialized. The chemists have done education a great service in asking pointedly the question whether secondary-school courses in their subject should be of the same type as college courses. The high-school student is certainly not ready for specialization in all of the lines into which he is carried by his curriculum. In some of the subjects at least he ought to be given general training. His teachers were, however, prepared for their teaching in higher institutions and were brought up to think of their tasks in strictly specialized terms. As a result, the high school frequently fails of its purpose because that purpose is obscured through lack of breadth of vision.

It is interesting to note that even the colleges are beginning to question the wisdom of highly specialized courses in all subjects for all students. Furthermore, certain popular books giving general outlines of the sciences and humanities are appearing and are stimulating the taste of educated adults for general insights into many fields of knowledge as distinguished from narrow and highly specialized acquaintance with one or two fields.

All of these discussions and tendencies are wholesome indications that much thinking is going on with regard to the proper scope and form of popular education. The chemists should be encouraged to continue this kind of examination of their science. Nothing can be more suitable for science than that it be scientifically presented to the minds to which it is to appeal.

AN EXPERIMENT IN SELF-MARKING

There are few high-school teachers or principals who have not at some time or other felt that the periodic marking of students has failed to accomplish its purpose because of the lack of meaning of school marks to all persons concerned. As a result, the questions have often been raised, "How can we avoid the danger of developing in the students the attitude that they are working for their teachers and parents rather than for themselves?" and "How can we eliminate the strong tendency among students to do just enough work to comply with the standards of passing required by the different teachers?"

During the past two years, Martin Minne, assistant principal of the Junior-Senior High School, Menominee, Michigan, has attempted to solve the perplexing problems of student-rating through an experiment in self-marking with eleventh- and twelfth-grade science classes. The method employed was as follows:

> Each day a short written test, either on review or advance work, was given as a part of the class exercise. Care was taken in the selection and formulation of questions so that the writing and scoring of the exercise would not exceed twelve minutes. Each pupil graded his own and a neighbor's papers on alternate days. In grading, they were permitted to use textbooks or to consult the instructor when in doubt. The marks awarded were recorded in the individual class books of the students. The teacher then graded the papers while the pupils were engaged in study. If the teacher's mark differed from the student's rating, the teacher and student conferred. The teacher recorded his marks in the class record. The students also evaluated their oral recitations and kept daily records of the same. At the end of the month, when the monthly reports were made out, the teacher and the students conferred. The monthly mark was based on an equal weight for daily written and daily oral work. In case of disagreement, the matter was discussed, and an agreement was effected.

Records of the cases of agreement and disagreement on the monthly marks were kept by Mr. Minne. It was found that disagreement was greatest at the beginning of the year. By the end of the year the judgments of students and teacher accorded very closely. For the two-year period, the number of monthly grades for 179 students on which student and teacher disagreed was 55 out of a total of 1,611. In approximately 30 per cent of the cases where there was disagreement, the students had marked themselves lower than they had been rated by the instructor.

The benefits claimed as a result of the experiment in self-marking are (1) that the students developed habits of critically and carefully evaluating their own written and oral work, (2) that a more wholesome attitude toward classroom study was developed, (3) that the delegating of responsibility by the instructor resulted in better classroom discipline and school citizenship, (4) that the formation of the habit of critical self-analysis resulted in a reduction in the rate of failure, and (5) that the students developed a higher appreciation of the standards of scholarship aimed at by the instructor.

LABOR UNIONS AND EDUCATION

The American Federation of Labor is aroused by what it regards as a dangerous tendency in America to suppress proper instruction about labor and to introduce false economic doctrines into the schools. It has, accordingly, prepared and published a pamphlet vigorously setting forth its findings and views on these matters.

With the controversial parts of this pamphlet we need not concern ourselves. The very interesting conclusion of all of the federation's considerations is that the schools must teach more social science. This conclusion is so significant and the support which labor can give it is so important that it is proper to quote in full what the pamphlet says as a very powerful reinforcement to the movement for the introduction of more social studies into the public schools. The conclusions of the federation are as follows:

1. Although there are selfish and reactionary forces at work endeavoring to influence public school education, the effect of these forces is minimized to a large extent by those progressive bodies striving to raise the educational standard along lines considered sound by our most eminent educators.

2. Nevertheless, these reactionary forces have done considerable harm to public education, not so much by their direct influence on the content of textbooks and curricula as by the subtle prejudices they have created, especially in the minds of legislators and public education officers. These prejudices work themselves out on the great body of teachers, tending to deprive them of independence of thought and action. Indeed, the very moral freedom of teachers has been and is being menaced by these forces. Thus perhaps our schools are facing their greatest crisis in this quarter. This situation can best be met by full publicity and by organization of the teachers themselves.

3. Virtually all educational authorities agree that the social sciences should be taught much more extensively than at present and, in fact, should become the backbone of our educational system, especially that of secondary education. One authority in particular would allocate one-third of the entire curriculum

in our schools from the kindergarten to the end of the A.B. course in college to the social sciences.

4. The researches and conclusions of prominent educational authorities who have given special consideration to the social studies show that the history, achievements, status, and ideals of the trade-union movement in the modern world form one of the most important parts in the adequate presentation of these sciences. This important conclusion is further confirmed by the expressed opinions and judgments of a large number of our most prominent educators as determined by special inquiry. The necessity for presenting both sides of any controversial phase of the labor movement is also stressed by these authorities. The whole course of the American Federation of Labor has been in entire accord with this position.

5. From two comprehensive surveys, one conducted in 1919 and another in 1922, and from other material and data surveyed, it is evident that the teaching of the social sciences is making headway in our public schools. Modern standards, however, are observed only in a portion of the schools teaching the social sciences, so that there is still much progress to be made in this respect.

6. One especially serious situation with respect to the extent to which these subjects are being taught is that economics, civics, sociology, or kindred subjects are, in most instances, given only in the last two years of high school. Thus a great number of students, even including those who pass through the junior high school, are deprived of an opportunity to become informed in these very important fields.

7. Courses of study and textbooks in history, civics, economics, and sociology are beginning to reflect the conclusions of educators that the labor movement as a force in recent and modern life is of such vital importance that it cannot be disregarded in our schools. The treatment of labor, its history, accomplishments, aims, and ideals, in modern textbooks, although much better than that accorded in the older type of texts, is still far from ideal. Errors, misstatement of facts, and misplaced emphasis are sometimes found. Again, inadequacy of treatment as well as the presentation of obsolete material by some textbook writers tends seriously to minimize the importance of the labor movement in the texts of these authors.

THE TEACHING LOAD IN 138 HIGH SCHOOLS

The Bureau of Education has published in the form of a leaflet a report on the teaching load of high-school teachers prepared by a committee of the faculty of the Polytechnic High School of San Francisco. This report is based on the results of a questionnaire sent in the spring of 1922 to 138 selected high schools in various states. It is not possible to repeat here the full details supplied in the leaflet. The summary table on page 728 is made up of the averages reported.

	Average Length of Periods in Minutes	Average Number of Weeks in School Year	Average Number of Weekly Pupil-Recitation Periods per Teacher										
			English	Language	History	Mathematics	Science	Music	Mechanical Drawing	Freehand Drawing and Art	Shop	Domestic Art	Physical Training
19 high schools in the New England states	46	39	555	429	494	506	475	464	387	451	448	414	920
24 high schools in New York, New Jersey, and Pennsylvania	43	39	702	685	753	748	711	1,001	637	637	430	498	1,315
17 high schools in the southern states	45	37	667	592	668	655	584	727	459	470	440	366	754
19 high schools in the north central states	47	39	603	522	607	585	563	803	496	641	457	439	953
26 high schools in the middle western states	51	37	569	510	581	597	544	546	498	536	434	426	782
10 high schools in Washington and Oregon	53	40	583	547	666	655	555	961	554	551	495	571	905
12 high schools in northern California	46	39	578	592	643	555	610	621	593	723	691	534	825
11 high schools in southern California	44	38	565	518	623	643	430	474	459	476	412	331	1,096
Average for all of the groups	47	38	609	554	628	620	568	713	521	580	463	441	968

PRIZE OFFERED BY THE WORLD FEDERATION OF EDUCATIONAL ASSOCIATIONS

A gift of $25,000 to be used as an award for the best plan to bring to the world the greatest security from war has been made to the World Federation of Educational Associations by an unnamed donor, Augustus O. Thomas, commissioner of education of the state of Maine and president of the World Federation of Educational Associations, has announced.

The donor, who watched the proceedings of the world conference on education at San Francisco in June and July, believes that lasting peace can come only through education, Dr. Thomas said, and desires to encourage a movement calculated to promote friendliness among the nations. He continued:

> The federation joins the donor in the belief that such a reformation as the award is to promote must await the longer processes of education. It accepts also the belief that textbook materials and teaching attitudes are all-essential, and any plan proposed must have for its principal object the bringing about of a better understanding between nations with the elimination of hatreds, both racial and national.
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> A plan of education calculated to produce world amity is desired. There is a distinct difference between this plan and the one called for by Edward Bok, inasmuch as this contest calls for a world-wide program of education which will promote the peace of the world.
>
> The contest is likewise world-wide and open to interested persons of all countries. It is the conviction of the giver and the federation that universal peace must have universal application and must begin with unprejudiced childhood. It is also desired to create a world-wide thinking on the subject of the golden rule as applied to international contracts and to produce psychology or "world mindedness," such as will support any system of diplomacy or any functioning of the state.

THE HIGH-SCHOOL PRESS

The Chicago Association of Commerce devoted the complete issue of its magazine for October 27 to a full account of the activities of the high schools of the city of Chicago. It is difficult to select from among the numerous articles the one which is most likely to be of general interest. Perhaps the article describing the publications of the various high schools is the most appropriate because it opens with a comment which applies equally well to the high-school papers of other cities.

The first four paragraphs of this article are as follows:

Publishing a high-school newspaper is not a recreation; it is a business. Not only that, it is a business that demands the constant exertion of the alert mind of its editor, long evenings in the editorial room for the entire staff, and after-school journeys by the advertising department to the offices of neighborhood business men. That Chicago high-school editors have ceased to regard the publication of their various papers as an event of a semi-sportive nature is proved by the numerous prizes in journalism which they have won. Chicago school papers have created comment and secured blue ribbons in state and national contests.

The high-school weekly is a growth. Not more than five or six years ago most high schools were publishing monthly magazines of a decidedly inferior nature. They contained short stories, limited in scope and stilted in manner. They were books which were decidedly difficult to read; the purchasers were moved to buy them because of "school spirit" and a curiosity as to whose names might be attached to time-worn and bedraggled jokes. Some of these magazines contained departments of merit—in some instances these departments live as traditions in the weekly of today.

At the time of the monthly English teachers passed on to the magazine editor such themes, discourses, verses, and word combinations as resembled the work of a Dumas in miniature. The policy was decidedly limited, and the magazine was in the hands of members of the faculty whose interest in the publication centered on pride in the printed words of star pupils. Nearly all of these monthly magazines have given precedent to weekly newspapers. There are few high schools of any size in Chicago and elsewhere that do not publish a weekly paper which supports itself.

What brought about the great change is a question. Nevertheless, it has come, and the school house organs published today receive justified acclaim from their subscribers. The students are doing the work; the editors are carrying the burdens on their own shoulders; the faculty advisers remain within the boundaries suggested by their titles. The papers are, as a rule, well printed, the make-up pleasing, the policy well defined and the humor, while usually of a personal nature, neither caustic nor silly.

STUDENT PLACEMENT

Dean Hawkes, of the College of Liberal Arts of Columbia University, describes as follows the effort which that institution is making to guide instruction by means of tests.

For the past five years Columbia College has been a center of activity in the study and use of mental tests and the so-called "new" type of examinations in collegiate education. There is now a sufficient body of data bearing on the use of mental tests as part of our new requirement for admission to warrant

the statement that this requirement affords the most accurate criterion of the capacity of students to do college work that we have ever employed.

A method of placement in college courses is called for which shall be, if possible, superior to that afforded by the old entrance examinations.

The needs of the situation can best be illustrated by the subject of English composition. Competence in the use of the English language implies acquaintance with a reasonably large vocabulary of words, ability to spell these words correctly, a knowledge of their proper construction in phrases and sentences, and facility in organizing them in a piece of sustained composition, either narrative, exposition, description, or argument.

The easiest and worst way to treat the question of spelling is to fail the student who misspells a certain number of words in his examination. Though the student speaks with the tongues of men and of angels and fails to spell six words correctly, his ability to command the language as a medium of expression counts as nothing.

Shakespeare and Washington would alike fail in English under this system. This method, which has been in common use in many colleges, has encouraged the humiliating practice on the part of many an honorable but discerning student of taking an account of stock of the words that he knows he can spell even under an emotional strain and of confining his literary efforts to that restricted vocabulary. A system that results in such a practice is almost, if not quite, immoral.

It is proposed to meet this condition by asking each student who is admitted to college to take a placement examination, or set of examinations, in English, which will follow the lines of cleavage indicated. By means of a spelling test, a vocabulary test, a construction test, and a composition test, it is anticipated that any weakness of the student will be discovered and isolated.

In case he cannot spell, but is otherwise competent in the use of the language, he will be admitted to the college course in English, but required to take without credit a course in spelling in order to strengthen his weak spot. A similar procedure will be followed in the case of failure in any one of the other aspects of composition. This plan seems more intelligent than the rejection of the student without either giving him a diagnosis of his trouble or affording any means suited to his infirmity for overcoming it.

ADVERTISING THE ADVANTAGES OF EDUCATION

Superintendent Tope of Grand Junction, Colorado, has interested a number of the business concerns in that city in advertising the schools at the same time that they advertise themselves. The business firms pay for space in the daily papers and publish such advertisements as those which are here reproduced so far as their reading matter is concerned. It is to be noted that the advertise-

ments lose much of their effectiveness when the pictures and display forms are omitted, as they must be in these reproductions.

How far will you go?—Elementary school, high school, college?

It will cost you some money to go to college when you are through high school.

Many boys and girls are unable to go because they do not save money during childhood and youth.

Open a savings account now and get one of our coin savings banks so you will have a lot of cash when you graduate from high school. Then you can go to college.

Education is the nation's bulwark because

1. It is a financial investment that yields the highest dividends.
2. It results in safe and sane citizenship.
3. It increases the ability and desire to serve others.
4. It adds to the appreciation and happiness of life.
5. It multiplies the chances of success in life.

Boys, Remember our business is to keep you well dressed while you go to school and get a good education.

The *Grand Junction Daily Sentinel*, which carried these advertisements, printed the following in large type across the third page of an issue just previous to the opening of school.

School opens September 4th. Begin on time. Do good work. Give yourself a chance to succeed. A good education will help to place you in a good position some day.

SUPERVISED STUDY IN MATHEMATICS

E. R. BRESLICH
University High School, University of Chicago

Supervised study is one of the movements aiming to retain the advantages derived from mass instruction and to overcome the disadvantages arising from it—in particular, to cease neglecting the individual. It means studying in the classroom under the direction of the teacher, under physical and psychological conditions most favorable for study, each pupil acquiring information independently, attaining mastery of the subject-matter, and developing proper habits of study. It offers excellent opportunities for teaching pupils how to study, which is one of the principal functions of the high school.

The importance of developing study habits has been recognized by teachers, administrators, and authors of textbooks. They have worked out directions and many rules containing suggestions as to methods of studying. However, rules and suggestions are of little value if they are not accompanied by systematic applications in the everyday tasks of school work. Study habits must be taught as carefully as subject-matter, and a technique must be developed for the best methods of teaching them. Many pupils are unable to get along in school work because they have failed to acquire certain important habits which the majority of the members of the class seem to possess. In supervised study those pupils are early identified who have not developed study habits. As soon as the teacher recognizes the lack of a study habit, the pupil's attention should be called to it. By being shown the disadvantage under which he is laboring, he is brought to realize the value of the habit and the desirability of developing it. Under the careful direction of the teacher he then begins to use it and to improve in his work from day to day.

General study habits.—Study habits may be classified in two groups, those that are common to, and needed in, all subjects and

those that are of special value to a particular subject. The following are some habits in which all high-school pupils should receive training.

1. Paying close attention. This is particularly important when instructions are given and when assignments are made, or when a new lesson is presented. The suggestions made by the teacher may be perfectly clear when they are given, but only a few pupils are able to recall them later when they are expected to use them in the assigned work. Hence they fail to make the connection between the suggestions and the task to be accomplished. The teacher's assignment must be brief, clear, and to the point. After that, the responsibility rests with the pupil. When the pupils are properly trained in paying close attention, it should not be necessary to repeat the suggestions.

Not all pupils know what "paying attention" really means. A teacher presenting a lesson to a class in geometry observed a boy playing with his drawing instruments. He interrupted his discussion to say, "John, you are not paying attention." John replied promptly, "I am paying attention." The teacher went on with the lesson, and John continued to play with his compass but kept his eye on the teacher. He interpreted the teacher's rebuke to mean that so long as his eye was fixed on the teacher he was paying attention. He should have been made to understand that his attention was divided between the compass and the teacher's talk, that attention of the correct type means undivided attention, and that nothing else can be accepted.

2. Beginning work promptly. Many pupils use more time getting ready to work than in doing the work after they get started. With proper working conditions and with the necessary materials, no time should be wasted. It is better to extend the time for play a few minutes and then to begin work promptly than to stop play early and waste time getting ready. "Play hard while you play but concentrate and have the will to learn when your studying begins" is a valuable principle to teach.

3. Good reading habits. In general, pupils do not possess good reading habits. Lyman gives the following list of important habits of assimilative reading, slightly modified for the present purposes.

a) Reading with a definite purpose, a problem, in mind.
b) Grasping the author's point of view and central theme.
c) Laying hold of the order and arrangement of the author's ideas.
d) Pausing occasionally to summarize and repeat.
e) Constantly asking questions of what you read.
f) Continually supplementing from your own mental stock.
g) Evaluating the worth of what you read.
h) Varying the rate of progress through the reading.
i) Connecting what is read with problems of your own.[1]

Points *d*, *e*, and *f* are particularly valuable in mathematics. They emphasize the fact that pupils, as they read, must bring to mind associated and related ideas. Many pupils get only words from reading and fail to get the thought. They read a whole page without being able to repeat any of what they have read. When progress in a course depends on ability to read, these pupils soon fall behind. A teacher reported a boy to be a hopeless failure in geometry. The supervisor summoned the pupil for a conference, at which the following conversation took place.

Teacher: You are reported as having difficulty in mathematics. What seems to be the trouble?

Pupil: I don't know. I don't understand any of it.

Teacher: You mean to say that you understand absolutely nothing in the course?

Pupil: Yes. I can't make any sense of it.

Teacher: Are you studying; are you trying as you should?

Pupil: Yes. I read as much as the others in the class, but I guess I don't understand it so well as they do.

A book was secured, and the pupil was asked to read aloud. He read fluently and rapidly one of the theorems and was asked to stop.

Teacher: Do you understand that?

Pupil: No. I don't know what it means.

The pupil was asked to read again from the beginning. He started to read as rapidly as before but was stopped after the third word.

Teacher: Do you understand that?

Pupil: Yes. I do.

Teacher: Read on.

[1] R. L. Lyman, "The Teaching of Assimilative Reading in the Junior High School," *School Review*, XXVIII (October, 1920), 603.

After the reading of each of a number of groups of words the pupil was stopped and asked, "Do you understand that?" In each case the pupil said that he understood what he had read. This was kept up to the end of the statement. He then said that he understood all of it. He continued to read the proof, one statement at a time, and understood all but two minor details which he was told to assume as true for the time being.

This little lesson in reading was sufficient to put a pupil on the road to success who, according to both his own admission and his teacher's statement, was hopelessly lost in the course. The difficulty was not in the subject, in which no help was needed or given, but arose from the lack of good reading habits. Having had this brought to his attention, the pupil saw the handicap under which he was working. So long as reading meant simply running rapidly over the content of the page, once or several times, progress had been impossible. As soon as he learned to read properly, he improved in his work.

4. Sustained application and concentrated effort. Without training, some pupils apply themselves only to those things which appeal to their interest. When they are not being entertained, when a difficulty is to be overcome, they soon cease to put forth any effort. They may appear to be studying, but, in fact, they are marking time. They are satisfied with the minimum performance, and they lack energy and resourcefulness to continue further. These pupils have to learn that they will be held responsible for results, that they must be able to give an account of the time spent in study. They should be trained to apply themselves thoroughly and to try every available device or suggestion in order to get the assigned work started and completed. What is your method of attack? What have you tried? How far have you read? What does the problem say you should do? These and similar questions are to be answered by the pupil who always says, "I can't do anything." If he knows that he is expected to report some progress each time the teacher passes his desk, he soon develops the capacity to apply himself to the work which must be done.

5. Asking the right kind of questions. Some pupils ask questions without having made the least effort to find the answers.

Others do not ask questions at all. It is important that pupils be encouraged to ask questions about things which they do not understand, but they must give the matter some thought before they speak.

6. Correct critical attitude. Statements made and questions asked by pupils should be carefully considered by the other members of the class. A statement made by the poorest pupil should receive just as courteous consideration as a statement made by the brightest pupil. Only too often the former is ridiculed while the latter's opinion is accepted without challenge. The same critical attitude toward both must be insisted on if pupils are to be trained to have their own opinions and to back them up with reasons.

7. Clean-cut and neat writing. Most supervised study calls for written work. From the standpoint of mathematics it is important that the written work should always be clean cut and neat. A careless piece of work is only too often the cause of errors. It may even result in failure to work the problems. The habit of poor writing may lead to habits of poor mathematical thinking. It is important, therefore, that pupils be trained from the beginning to do neat work. An easy cure for careless writing is obtained by letting the pupil complete the assignment of a piece of written work and then insisting that it be rewritten in desirable form. Not many such experiences are needed to induce the pupil to do better. No poorly written paper should be accepted even though the work is done well so far as it concerns mathematics. It is a good plan to exhibit especially well-written work to stimulate the pupils to write well. The use of scratch paper is to be prohibited, because it is probably one of the greatest causes contributing to careless written work. The following directions have been found to be helpful.

a) Plain No. 6 notebook paper is to be used. Ruled paper is objectionable because the lines on the paper interfere with the lines in geometrical drawings.

b) On each paper the name of the pupil and the date should be given in an assigned place, e.g., in the upper right-hand corner.

c) The name of the class—for example, Math. I—and the page or the pages of the book should be written in the upper left-hand corner.

d) Parallel to the left edge of the page and about one inch from it, a line should be drawn to leave a margin for marking and criticisms by the teacher. The pupils should write nothing on this margin.

e) The perforations should always be on the left side of the paper, and pages should never be torn from the notebook.

f) Only one side of the paper should be used.

g) The number of the problem corresponding to the number in the textbook should be written near the left-hand margin.

h) All work should be written with pencil (medium hard, never soft). Few pupils are able to make good drawings in ink.

i) Work should not be crowded on the page.

j) All drawings should be made with ruler and compass.

k) All answers should be marked plainly.

In algebra the page should be divided into two parts by a vertical line. All clean work is then written on the left side of the line of division, all computations to the right in the proper horizontal position. The teacher can often get a better understanding of the pupil's difficulty from a study of his computations than from the "clean work." Knowing that the teacher may examine his computations, the pupil tries to work his problem correctly at the first attempt and becomes careful and exact in his work.

A very helpful device for teaching pupils to arrange geometric proofs and constructions in a clear and simple manner is the "theorem paper" distributed by the University of Chicago Press. This paper may be used for several days until every pupil in the class understands clearly the form in which the proofs are to be written. After that, notebook paper should be used, the pupil dividing his paper as shown on the theorem paper. The theorem is written horizontally across the top of the page. Below this a two-inch strip is marked off. This is divided into two parts by a vertical line. On the left side the pupil enters the facts given and to be proved. On the right side the diagram is made. The remaining part of the page is also divided vertically, the left side being used for the statements and the right side for the authorities.

8. Effective reviewing. It is commonly assumed that pupils have correct habits of reviewing. Review lessons are assigned on work studied in class or in preparation for a test, but pupils have not the least conception of what is expected of them. When a review assignment is made, many students leave the classroom with the feeling of "no lesson for tomorrow." To determine the extent of the pupils' knowledge of the correct method of review

for a test, a teacher said to his class of twenty-one pupils, "Tomorrow we shall have a test. We shall use today's class period for review." Giving no further suggestions, he watched the class to see what the pupils would do. Some turned the pages of their books rapidly, reading superficially, and not getting anything in particular from their reading. Others read one page over and over again. Others who met some difficulty spent the entire period in an effort to overcome it. They had no appreciation of the value of time, for they had but fifty minutes in which to review the work of three weeks. One pupil saw that he could not cover the ground in the time allowed and asked to take his book home. One student had been absent a day and asked the teacher for a little help. Several pupils had to be cautioned because they were not studying at all. At the end of the fifty minutes, two pupils said that they were through; thirteen said that they were more than half through. Apparently the class did not succeed, under the most favorable conditions, in covering the ground in fifty minutes, a period of time longer than pupils are usually expected to spend in reviewing for an announced test when they have, at the same time, home assignments in several other subjects.

At the very best, a review just preceding a test is not satisfactory, even when the pupils neglect their other subjects and use all of their time cramming for the test. They must be trained in the classroom, under the direct supervision of the teacher, how to review daily the work done in class. If they review consistently every day the important parts of the unit which is being studied, they will be prepared to take the test when the time comes without further special review. There is a tremendous loss of the pupil's time in class and out of class when he has not learned a definite method of procedure for reviewing his work. For example, in reviewing the theorems contained in a certain unit in geometry, it is unnecessary—in fact, undesirable—to read in detail every statement in the proofs.

The following method of reviewing has been found very effective. The pupil reads the first words of the theorem and then completes the remainder from memory. He makes a mental picture of the drawing with all of the auxiliary lines and then looks at the diagram

in the book to note any omissions or mistakes. He recalls the method of proof and finally the important steps in the proof. If a proof is really understood, it will not be hard to recall the details later in a test. Reviewing daily the theorems in a given unit as outlined will keep the pupil's attention on the unit which he is studying and will make it his permanent possession. It cannot be left to him to discover the most effective method of reviewing. Having been taught how to review, he should form the habit of spending a few minutes daily in going over the important facts.

9. Making ready use of devices. Pupils must learn to make use of footnotes, suggestions given by the author of the textbook, the index, etc. They need to be taught how to collect information and to consult the dictionary concerning words the meanings of which are not clear.

Strictly mathematical study habits.—The following list of strictly mathematical study habits to be taught is suggested by Carter:[1] (1) the habit of making a mental summary of what is given and what is to be found; (2) the habit of getting and holding in mind the conditions of the problem in general terms—to avoid the extra effort and confusion resulting from remembering involved verbal statements and long numbers; (3) the habit of deciding what will have to be found before it will be possible to obtain the required answer; (4) the habit of deciding, before making the computation, what to do with a partial answer when obtained; (5) the habit of deciding the kind of units in which the answer will be expressed; (6) the habit of deciding whether the answer seems reasonable before going through the actual proof; (7) the habit of proving the answer (in algebra, in the original problem instead of in the equation).

The teaching of each of these habits presents several problems. It is important to determine whether the pupils have these and other habits. The solving of all of the problems every day is not proof of good habits.

Technique of supervised study.—There are three ways of providing for supervised study. First, supervised study in the class period with home assignments; second, supplementary supervised study

[1] Ralph E. Carter, "Teaching a Study-Habit," *School Review*, XXIX (November and December, 1921), 695–706, 761–75.

classes; third, supervised study in the classroom with no home assignments. The first plan allows for comparatively little time for study since a considerable part of the class period must be used for the discussion of questions on home work and for recitation. The second plan is largely for those who are unable to master the work in the class period, for those who have not applied themselves, and for those who have certain difficulties and need a little help or a few suggestions to enable them to proceed. A report on the technique of conducting this period is given by Harris.[1] Two classes of pupils came to this study class: those who were sent, including the pupils who had been absent, the pupils who had failed in the recitation, and the pupils who lacked ability; and those who came voluntarily to get help on specific difficulties. The third plan is the ideal plan. Without home assignments, recitations can be minimized and to a large extent abandoned. The time saved can be used for teaching, class study, and testing.

The question of the amount of time to be used for supervised study is an important one. Some have favored a division of the class period, allotting a definite number of minutes to each of the various activities to be carried on. For example, in one school the following division of a sixty-two minute period is used: "(1) recapitulation—five minutes; (2) statement of the business of the day—two minutes; (3) discussion—twenty-five minutes; (4) assignment—five minutes; and (5) study period—twenty-five minutes."[2]

Others regard the double period as the best plan, and still others advocate a lengthened period, e.g., a ninety-minute period. An arbitrary division of class time for study and other purposes has in its favor the fact that it is an administrative device for securing co-operation on the part of every teacher. Pedagogically, it is unwise to decide arbitrarily in advance when the lesson is to be taught, when supervised study is to begin, and when the recitation is to be held. These divisions must follow one another in a natural

[1] G. L. Harris, "Supervised Study in the University of Chicago High School," *School Review*, XXVI (September, 1918), 490–510.

[2] Eula Young and M. R. Simpson, "A Technique for the Lengthened Period," *School Review*, XXX (March, 1922), 199.

order. It may be for the best interests of the class to teach a lesson several times before attempting study. The whole period may be used largely for presentation and teaching purposes. Similarly, one or more periods may be needed at times for continuous uninterrupted study of a certain unit. To curtail the teaching time at a moment when the class is just beginning to understand, or to interrupt assimilation before mastery is attained, is a mistake. Teachers and pupils dislike an arbitrary time limit. The disadvantages are more than sufficient to offset the administrative advantage gained by such a division.

The technique of supervised study is really very simple. After the lesson has been taught and after a brief oral test has been given to determine whether the pupils have caught the idea and have grasped the principle to be assimilated, the class begins work at once on an assignment. The teacher, standing at the desk, waits a few minutes until everyone is at work. Then he moves quickly up and down the aisles to make a first survey of the situation, noticing particularly what the slow pupils are doing but not stopping to give individual help. If it is found that a number of the pupils, besides the few who will always have difficulty, are unable to get started, or if some unexpected difficulty or general misunderstanding interferes with progress, all of the pupils should be asked to stop. Further teaching may be needed or a few suggestions or some additional directions. Failure to make this first quick survey may cause much waste of time. The simplest directions are sometimes misunderstood, and the pupils are losing time vainly trying to get started in their work before the teacher realizes that there is a general difficulty. To illustrate, in a class in mathematics the teacher gave the following direction as the first step in a problem to be solved: "Draw a right triangle with one of the acute angles equal to 30 degrees." The pupils worked busily while the teacher stood at the desk. After some time, when the teacher thought that a number of the pupils should have completed the solution, he asked those who were through to raise their hands. There was no response; everyone was working industriously, and the teacher decided to wait a little longer. Soon it became apparent that the pupils were not getting results. They looked puzzled. The teacher

then walked down the first aisle in order to find out what the pupils' difficulties were, and he discovered the cause immediately. The class had been studying angles for some time. The pupils had confused right triangle with right angle. They had drawn a right angle, divided it into two acute angles, one of 30 degrees, and could not go on with the remainder of the problem. A quick survey would have detected this difficulty at once.

There is another reason for making this survey. Pupils will settle down to work and apply themselves promptly if they know that within a few minutes their work will be examined by the teacher, who will be quick to see what each pupil is doing.

The first survey is at once followed by a second. The teacher, passing from desk to desk, now gives assistance to those pupils who always have difficulty but pays little attention to those who need no help.

Throughout the remainder of the supervised-study period the teacher makes but brief comments to the pupils. Some pupils are encouraged; some are praised; others are criticized for bad habits of study, careless written work, and uneconomical use of time. If it is found that a number of the pupils make the same mistake, all work may be stopped and the difficulty explained to the entire class.

Because of individual differences, some pupils will make more rapid progress than other pupils. In fact, it is necessary that the pupils who are quick but careless, superficial, and inaccurate do more than the slow but industrious. It is a good plan to provide work for them in addition to the class assignments in order to keep them profitably employed. At the same time, the slow pupils should not be neglected. Many of these, regarded as stupid or hopeless, are found to be doing some real thinking when their cases are carefully diagnosed. They are individualists and are not reached by rote teaching. With a little help and sympathy, they are soon put on the road to success.

When each pupil is studied and given the advice he needs, supervised study minimizes individual differences. These differences are sometimes due more to lack of training than to lack of ability.

Problems for the teacher.—As simple as the technique of supervised study may seem, it raises serious problems for the teacher. The following points should be kept in mind.

1. Every pupil must be provided with a complete equipment with which to do his work. He must have it at hand when the class period begins or there will be interruptions later. Two pupils should never be permitted to use the same eraser, compass, ruler, or protractor, nor should they be allowed to talk or help each other. This usually raises questions of discipline and interferes with the work of the teacher whose time and energy must go toward helping individuals.

2. The teacher must not become too much engrossed in the efforts of one pupil, or of a few pupils, while the others waste time and the class suffers from inattention.

3. Individual pupils must not get too much help or they will never become independent. It is poor policy to make the same suggestion to a pupil day after day. He must begin to help himself. Supervised study should secure self-activity on the part of every member of the class.

4. Special devices must be worked out for giving help. If the pupil's difficulty is due to poor reading, he may be asked to read again, to reconstruct the sentence, or to look up the meaning of a word. He must be given time to think. The easy way of telling him everything is not advisable. However, when it becomes apparent that with the best effort a pupil cannot do the work, he deserves more help than a question or a suggestion.

Unusual pupils will be found. In a large school the bright pupils may be grouped together and either allowed to proceed more rapidly or given a deeper course than the others. In a small school they may be given additional work when they have covered the assignment or they may be released for other work until the class as a whole has caught up with them.

Supervised study is a greater physical strain on the teacher than the traditional recitation period. The teacher who considers the supervised-study period a time of rest in which to dispose of minor clerical tasks, or to read the morning paper, will accomplish nothing. The progress of every individual has to be watched; everyone's needs have to be attended to. Unless carefully handled,

children of high-school age will become disturbing factors. At no time during the study period should a teacher busy himself with work other than that of directing pupils. Only when everyone is working satisfactorily should the teacher be seated at his desk. Then the few pupils who need his help may come to him one at a time.

Results of supervised study.—When supervised study is carried on successfully, it is possible to minimize or eliminate entirely all home work, at least for the younger pupils. With the new work being done in school, home work of the traditional type becomes an unimportant factor in the pupil's progress. There will be need for drill or review outside of the classroom, but with such home work the class will have no difficulty, as the objectional features have been removed. Pupils are now free to spend their time at home on those subjects in which they have developed special interests. Under the guidance, and with the advice, of their teachers, time spent on such work will be most profitably employed.

Supervised study is excellent training for the teacher. The difficulties of the course are bound to come to the surface. Lack of knowledge regarding them has always been the cause of much unsuccessful teaching. With concrete evidence before him, the teacher learns to anticipate these difficulties and to improve his methods of presentation. He will be able to give instruction which all pupils can understand. The following illustration shows how exact conditions are revealed.

A very good and experienced teacher had just taught a seventh-grade class how to solve an equation of the form $\frac{x}{3}+\frac{x}{5}=8$, emphasizing the following steps:

Multiplying by the least common multiple of the denominators:

$$\frac{15x}{3}+\frac{15x}{5}=15\times 8$$

Reducing: $5x+3x=120$

Collecting terms: $8x=120$

Dividing by 8: $x=15$

Check: $\frac{15}{3}+\frac{15}{5}=8$

$5+3=8$

Questions were asked and discussed, and the following problem was assigned: Solve the equation: $\frac{x}{4}-\frac{x}{7}=6$. Many mistakes were made, but each of the following mistakes was made by several pupils.

1. $\frac{15x}{4}-\frac{15x}{7}=15\times 6$. Apparently, the pupils making this mistake did not understand how the common denominator "15" had been derived in the illustrative example or how to derive the common denominator in the assigned problem.

2. The equation $7x-4x=168$ was followed by $11x=168$. In this case the pupils imitated blindly the illustrative example, in which the $8x$ was found by addition. They disregarded the minus sign in this problem and used the wrong operation.

3. $\frac{28x}{4}-\frac{28x}{7}=28\times 3$. Several pupils had concluded that the "8" in the right member of the first example was the result of adding the denominators. Hence, in the second example they wrote in the corresponding place the difference: $7-4$, or 3.

4. In the check several pupils had the following: $\frac{28}{4}-\frac{28}{7}=6$. In the first equation it happened that both the solution and the multiplier were 15. Instead of using the solution "56" in the check, the pupils used the multiplier "28."

Without supervised study these mistakes would not have come to the teacher's attention. She would have explained the method, applied it to a problem, and assigned for home study several other problems to be solved in a similar way. The pupils would have wasted some time, received more or less help somewhere, and would have brought in correct solutions the next day. From the reading of their papers the teacher would have been led to believe that they had attained mastery of the process.

How to introduce supervised study.—The interest and co-operation of the teaching staff are of importance. Frequently teachers who do not care to, or do not know how to, carry on supervised study continue to use their old methods of recitation during the double period, with the result that each day the pupil has to do twice as much home work as formerly. It is difficult to force the plan of

supervised study on a hostile or poorly informed teaching staff. Moreover, the teachers who feel the need of the plan and appreciate and approve of what is expected of them recognize the advantages and do not have to be urged to use it. Hence, before putting supervised study into a school, it is necessary to prepare those teachers whose attitude and ability will decide the success or failure of the undertaking.

Hall-Quest[1] points out the dangers and difficulties of applying supervised study without a thorough understanding of the local conditions. The fact that a certain type has succeeded somewhere is no guaranty that it is the right one for every school. Hall-Quest gives a few directions and suggestions of procedure growing out of considerable experience with the introduction of this method. He advises the principal and teachers to familiarize themselves with the meaning, purposes, aims, and types of supervised study and to study the local conditions so that the best possible adjustment may be made in order that the introduction of this plan may not disrupt and disorganize the present school organization. The plan should be introduced gradually so that it can be modified at will and its effects studied before they become disastrous if they show any such tendency. The class period should be lengthened to about fifty minutes. The bulk of the period should be devoted to study and not to recitation. Hall-Quest advises the introduction of the divided period at first because under this system the teacher has an opportunity to supervise the studying of his own pupils. Where considerable time in school is devoted to study, the home work should be reduced proportionally. The plan should be flexible so that it may vary with the subject and with local conditions. This is where the success of the plan depends to a large extent on the teacher. An intelligent study of the needs of the instructor's respective groups will point the way toward getting the best results with directed study.

[1] A. L. Hall-Quest, *Supervised Study*. New York: Macmillan Co., 1920.

THE PRINCIPAL'S LOAD

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A careful examination of current professional literature reveals the fact that articles written concerning the high-school principal are very general in nature. No one seems to have a very clear conception of what the high-school principal is or of what his duties are or should be. Many have expressed their opinions of what he ought to be and do, but few have attempted any study, scientific in nature, by which to determine exactly what he is or what he does.

Recent articles would seem to classify the high-school principal's main duties under three general headings: (1) administration or the execution of school policies, (2) the direction of the social activities of both the high school and the community, and (3) supervision. Briggs, for instance, says, in his article on "The Professionally Trained High-School Principal," in the *School Review*: "The duties of the principal fall into three major classes: administration, the direction of the social life of the school, and the improvement of instruction."[1] That this classification is grossly inadequate to cover the principal's obligations to himself, his school, and his community is, or should be, perfectly obvious.

In view of these facts, it is worth while to ascertain in a somewhat more accurate manner what are the duties and responsibilities of the high-school principal and to know somewhat more definitely how much time he devotes to the fulfilment of these obligations in at least one state of the United States.

In the spring of 1922, a "Committee of Fifteen" was appointed by the California High School Teachers' Association, with C. E. Rugh, professor of education at the University of California, as its chairman. It was the intention and purpose of this committee

[1] Thomas H. Briggs, "The Professionally Trained High-School Principal," *School Review*, XXX (November, 1922), 657.

to make a thorough investigation of conditions in the secondary schools throughout the state of California and to report the findings to the California High School Teachers' Association. The work has been progressing notably and should be completed in the near future. A large body of information about the high-school Senior has been collected. A very exhaustive study has been made of the high-school teacher's load. Among other studies of vital importance, the high-school principal's load has been investigated. That part of the last-named investigation which covers the distribution of the principal's time over various types of "loads" will be considered here.

The study, of which this is a summarized report, was carried on by means of a questionnaire, which makes it subject to the academic criticisms and limitations common to all questionnaire studies. It seemed, however, to be the only feasible method available for collecting sufficient data for such an extensive study.

After reviewing several questionnaires on the teacher's load and those available on the principal's load, the committee compiled a questionnaire concerning the high-school principal. This questionnaire was very bulky and detailed, consisting of six pages. It was then submitted to fifty high-school principals and other educators for criticisms and suggestions. On the basis of the suggestions thus received, the questionnaire was remodeled and reduced to three pages in length. This new form was much more concise, containing everything of importance which was found in the first. This was the questionnaire used in the study here presented. It was sent in December, 1922, to all high-school and junior high school principals and vice-principals in the state of California.

One hundred and twenty-five questionnaires, or 42 per cent of the total number sent out, were returned by the principals of the regular high schools and supply the data here treated. For the sake of simplicity and because of insufficient returns, the "loads" of the junior high school principals and vice-principals will not be considered here.

For convenience in handling the data and in order to make the results more applicable to the different sizes of high schools, the schools were classified on the basis of enrolment. All schools

with an enrolment of 350 or more pupils were placed in Class 1; those having 150 to 349, in Class 2; and those having 149 or less, in Class 3. A further division was made by separating all schools having a superintendent from those not having a superintendent.

It might be well to explain at this point the difference between the high schools in California and those in other states. By far the great majority of high schools in California are not in city systems and therefore are separate units, having a principal for their chief administrative officer. This leaves the school without a city superintendent.

On account of the fact that there are so few high schools in California having city superintendents, the returns from the schools having superintendents are few, there being sufficient returns only from high schools in large cities. For the sake of convenience, this class will be called "Class 1*s*." The other classes of high schools, having no superintendent, will be called Classes 1, 2, and 3. Replies to the questionnaire from the various classes of high schools were received as follows: Class 1*s*, 19; Class 1, 13; Class 2, 33; and Class 3, 60.

The questionnaires were first separated into the different classes and then arranged in alphabetical order. Each item on the questionnaire was then tabulated. The mean, median, and the lower and upper quartiles were found for each item, keeping the different classes of schools separate. Those cases which fell between the upper and lower quartiles, or the middle 50 per cent, were taken to be representatives of the group. This more extensive central tendency was taken because it was thought that any single measure of central tendency would be too rigid a standard of comparison.

Table I, which shows the median time and the time spent by the middle 50 per cent of the principals, summarizes the results obtained from the study. Each item is presented as it appeared in the questionnaire. This table should be read in the following manner. In the high schools of Classes 1*s* and 1, the time used by the principals in each subdivision of the "Instructional load" is negligible; that is, less than 50 per cent of the principals reported any time for these loads. Principals of Class 2 high schools devote a median of 7 hours per week to the teaching load; the middle

50 per cent devote between 4 and 10.5 hours per week. Principals of Class 3 schools devote a median of 17 hours per week to teaching; the middle 50 per cent, between 10.25 and 18.75 hours per week. Time used in "preparing for and cleaning up after laboratory, shop, etc." and for the item "any other instructional duties" was negligible for all classes of schools.

The totals as they appear in Table I are not the totals of the medians or quartiles, but rather the medians and quartiles of the total time used in all of the subdivisions of the main items. These totals should be read thus: The median time used by principals in Class 2 schools in all duties of the "Instructional load" is 16.25 hours per week; the middle 50 per cent devote between 10.5 and 21.25 hours per week to their total instructional load. Principals of Class 3 schools use a median time of 30 hours per week for instructional purposes; the middle 50 per cent use between 24.5 and 35.75 hours per week for the total instructional load.

It is not contended that Table I does or should represent an ideal or standard; it is, rather, a measure of the actual practice as it exists in one portion of the field. This is how high-school principals of various types in California actually distribute their time. It may be used by other high-school principals as a guide or a measuring stick by which they may check up on their own division of time. There need be no great cause for alarm, however, if, in checking up, a principal finds himself falling outside of the middle 50 per cent in some of the items listed.

Departure from California practice may be due to local interests, needs, and demands, or to other peculiar situations. Every day is different, as well as every week. As one principal puts it: "Variety is the spice of life. No two days are ever alike in a principal's work. Every day brings something new. He that would be chief among you shall be servant of all. The all includes seventy-five teachers, fifteen hundred students, and double the number of parents. Stop-watches and programs have to be forgotten." Too rigid a standard cannot be maintained. Some weeks may be normal, while others will vary a great deal, on account of outside interests. On the other hand, should a principal find himself badly out of step with the procedure of the group represented in

TABLE I

	Class of School							
	12		1		2		3	
	Median	Middle 50 Per Cent	Median	Middle 50 Per Cent	Median	Middle 50 Per Cent	Median	Middle 50 Per Cent
1. Instructional load:								
a) Teaching	Negligible	Negligible	Negligible	Negligible	7.00	4.00–10.50	17.00	10.25–18.75
b) Study supervision	Negligible	Negligible	Negligible	Negligible	4.00	3.50– 7.00	4.50	3.75– 7.25
c) Preparation of lessons	Negligible	Negligible	Negligible	Negligible	3.25	1.50– 5.25	5.00	3.00– 7.00
d) Helping pupils with work	Negligible	Negligible	Negligible	Negligible	1.50	1.00– 3.00	2.00	1.50– 3.50
e) Correcting papers	Negligible	Negligible	Negligible	Negligible	1.50	1.00– 2.50	2.00	1.50– 3.50
f) Preparing for and cleaning up after laboratory, shop, etc.	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible
g) Any other instructional duties	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible
Total					16.25	10.50–21.25	30.00	24.50–35.75
2. Administration:								
a) Management of school plant	5.00	3.75– 6.00	5.50	3.50– 7.25	4.50	3.00– 5.50	3.00	2.00– 4.25
b) Administration of school policies	6.75	3.25–10.00	5.00	4.00–11.00	4.50	2.75– 8.00	2.00	1.00– 3.50
c) Other administrative duties	5.25	3.25– 8.00	5.75	3.50– 7.50	3.50	2.50– 4.25	2.25	1.25– 4.75
Total	16.25	11.00–21.00	18.25	8.25–22.00	12.00	8.25–22.50	6.00	4.00– 9.25
3. Supervision:								
a) Visiting classes	7.75	4.50–19.00	5.75	3.50– 9.00	11.00	7.75–13.75	3.25	1.75– 5.50
b) Supervision of student activities	3.00	1.75– 6.00	3.50	1.75– 5.00	3.00	2.25– 5.00	2.50	1.25– 4.00
c) Other supervisory duties	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible
Total	16.25	9.50–25.50	13.25	6.50–16.25	10.25	8.00–16.25	6.00	4.25– 9.50

TABLE I—*Continued*

4. Clerical duties:								
a) Correspondence	4.25	2.25– 5.00	4.75	2.75– 5.00	3.25	1.75– 5.25	3.25	3.00– 4.50
b) Records and reports	3.50	2.25– 7.00	2.75	2.00– 5.75	4.50	2.50– 6.25	1.75	1.00– 3.25
c) Other clerical duties	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible
Total	7.00	4.50–12.50	9.00	4.75–12.00	8.50	5.00–13.50	5.50	3.00– 8.50
5. Professional load:								
a) Conducting or attending professional meetings	3.00	1.75– 4.25	2.50	1.50– 3.00	1.50	1.00– 2.50	Negligible	Negligible
b) Special committee work	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible
c) Professional reading	6.50	4.25– 7.50	3.25	2.50– 5.75	4.00	2.50– 5.75	3.50	3.00– 6.75
d) Attending extension classes	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible
e) Travel connected with school work	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible
f) Other professional work	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible
Total	14.25	8.25–18.25	8.00	5.75–11.00	8.75	5.50–11.00	7.00	4.00– 9.75
6. Additional income activities:								
a) Night or continuation school	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible
b) Private coaching	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible
c) Other income activities	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible
7. Community activities:								
a) Church work	1.50	1.25– 3.25	2.75	1.50– 4.00	2.00	1.75– 3.00	1.50	1.00– 2.75
b) Community social activities	3.25	1.50– 6.25	4.00	2.25– 5.75	3.00	2.00– 3.75	2.75	2.00– 4.00
c) Civic activities	2.50	1.50– 3.00	2.00	1.50– 3.50	2.25	1.50– 3.75	2.00	1.25– 3.00
d) Other community activities	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible
Total	8.00	4.25–10.50	7.50	6.50– 9.50	6.25	5.50– 8.25	5.50	3.25– 8.25
8. Recreational activities	10.00	8.25–17.25	13.25	6.25–15.75	11.50	6.25–15.75	10.00	7.50–13.75
9. Home duties	8.00	7.00–12.50	10.25	6.25–14.25	10.25	7.00–13.25	9.50	5.50–15.50
10. Other activities, including eating and sleeping	64.25	57.75–71.50	70.50	66.25–71.75	69.50	61.00–72.75	71.00	65.75–78.00

the middle 50 per cent, it might be well for him to make a survey of himself and his local conditions to see if he can justify his variation from the practice as here given.

One of the most serious criticisms which can be made against recent articles on the duties of the high-school principal is that they have failed to recognize the fact that the principal of the small high school is in a distinct class by himself. This is very serious when one stops to consider that three-fourths of the high schools in the United States have an enrolment of less than one hundred pupils and that the median high school in the United States has an enrolment of fifty pupils. When the principal of the large high school alone is considered, the major part of the problem of the high-school principal is neglected. This is undoubtedly the reason why most writers have set down the principal's duties as being in the nature of administration, supervision, and social direction. In fact, the time used in teaching by the principal of the small high school will approximate the total time he devotes to the three duties mentioned. The teaching load is by far the greatest load of the principal of the small high school and the one which practically all writers have omitted or at most have given a very insignificant place.

The next heaviest load which the principal of the small high school has to bear is that of recreational activities, such as reading for pleasure, going to the theater, physical recreation, etc. "Home duties" follows very closely. The fourth in amount of time used is the professional load. Supervision and administration come fifth and sixth, respectively, in amount of time consumed. Clerical duties and community activities rank last in amount of time consumed.

In the class of the large high schools, the order of importance is somewhat reversed. The instructional load, which ranked first in point of time consumed in the small schools, ranks last in this class. By far the greater percentage of principals in this class have no instructional responsibilities whatsoever. Their greatest loads are found in administration and supervision which consume approximately six hours per day. The professional load comes next. Then recreational activities, home duties, community

activities, and clerical duties follow with approximately the same amount of time devoted to each.

The principals of the middle-sized high schools seem to find a happy medium between the principals of the small high schools and the principals of the large high schools with regard to the amount of time they devote to their various duties. We find them teaching a little, which, of course, will react on the amount of time left for other duties.

In conclusion, the following statements will sum up in a very general way some of the findings of this study.

The principals of small high schools devote more time to teaching than do the principals of large high schools.

The principals of small high schools devote a larger share of their time to teaching than to any other single duty.

There is no great variation among the different classes of principals with regard to the amount of time devoted to clerical duties.

The principals of large high schools devote about three times as much time to administration and supervision as do the principals of small high schools. Administration is their greatest load, which is followed very closely by supervision.

The principals of large high schools devote about twice as much time to professional reading as do the principals of small high schools.

Very few principals reported "additional income activities" outside of their regular position as principal.

The principals of the middle class of high schools devote more time to visiting classes than do the principals of the other classes of high schools.

Principals of all classes of schools devote about an equal amount of time to community activities, recreational activities, and home duties.

From these results, it is fair to state that, so far as California is concerned, the principal of the small high school must be primarily a teacher. The principal of the large high school must be primarily an administrator and supervisor. Both must be fitted to assume an active part in social, recreational, and community activities.

THE EFFECT OF LATIN TRANSLATIONS ON ENGLISH

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Amicus Plato, amicus Socrates, (amicus Cicero), sed magis amita veritas.

One of the most important claims for the study of Latin is that it improves the English of the pupils. It is asserted that the intense scrutiny given to the writings of classic authors develops an appreciation of literary style and that translation develops powers of original expression. This study was designed to ascertain if this claim be true.

More than three hundred translations of prepared passages in Cicero were secured from pupils in fourteen public high schools—four in New York City, six in neighboring cities of considerable size, and four in villages—and one private preparatory school. Most of the translations were written tests given at the beginning of the class period, the assignment being distributed among groups of pupils, but many were recorded as the pupils recited. These latter were supplemented by records of the teachers' corrections and comments. Cicero was chosen so that the pupils would have had at least two and one-half years of Latin and one and one-half years of continuous practice in the translation of prose. Three-fourths of those who had begun the study of Latin had probably abandoned it;[1] at any rate, it may be assumed that the pupils whose translations were collected represented the survival of the fittest. Whatever good results they had not achieved probably were not achieved by any considerable number who were eliminated from the classes.

The translations were carefully studied. Attention was focused not on the accuracy of the translations but rather on the English

[1] *Report of the Survey of the Public Schools of Philadelphia*, Vol. IV, p. 169. Philadelphia: Public Education and Child Labor Association of Pennsylvania, 1922.

in which they were expressed. A record was kept of the aids given in the notes and vocabulary; an effort was made to detect the use of a "trot," each translation being compared with that of the most popular "pony"; the teachers' comments and the use made of them by the pupils were considered; and, finally, a classification was attempted of the translations as to their merit as English sentences.

A suspicion was entertained at the beginning that the copious notes and the special translations in the vocabularies of the several editions used would militate against a solution of the problem set; but it early became apparent that a majority of the pupils either do not use the editors' helps or else do not assimilate them sufficiently for reproduction in class. A plausible explanation is that the pupils neglect the suggested translations because they are imbedded in notes on grammatical relationships in which they have small interest. Of the three hundred translations carefully studied, the pupils could have found in the notes special help on 173; but, as a matter of fact, in only 28 per cent of the possible cases is there evidence that they did so. This finding substantiates the common complaint made by teachers that it is difficult for them to get the notes used at all. The pupils could have found special help in the vocabulary on eighty-two passages; there is evidence in their translations that only 30.5 per cent did so. In only six instances were the pupils' translations sufficiently like those of the "trot" to warrant the conclusion that it had been used.

The sole method of recitation observed was translation by the pupil, frequently interrupted by the teacher with corrections or improvements, followed by questions on syntax and occasionally on the derivation of English words. In only rare instances was the pupil required, before resuming his seat, to present an uninterrupted translation incorporating all of the suggestions made. This short-sighted economy of time results, of course, in similarly erroneous subsequent efforts. The following is an illustrative recitation, with the grammar questions omitted. The teacher's corrections are in brackets.

These were reflected—those labors were reflected on this life [desire of this life]. Those efforts which you boasted [were directed] to this desire of

life [pursuit of this kind of life] to lie on the ground for committing a crime; to watch for not only planning against the sleep of husbands, but the goods of the unemployed [peaceful citizens].

That this is typical is abundantly borne out by other records. It may be translation in the sense that certain Latin words or small groups of words are rendered into our vernacular, but the passage as a whole is not English.

Some teachers translated each small recitation passage after the pupil had completed his effort, but usually this supplement was so close a rendering of the Latin, in order and in idiom, as to contribute little, if anything, to the appreciation of good English, to say nothing of its use. The following is a pupil's translation, followed by that of the teacher:

Pupil: Now that I might separate myself, Conscript Fathers, a certain almost just complaint of the state, I ask diligently, as I say, let this sink deeply into your mind and hearts.

Teacher: Now that I may avert from myself by prayer and entreaty, Conscript Fathers, an almost just complaint of the fatherland, listen, I pray, diligently to what I say and allow it to sink deeply into your hearts and conscience.

This translation by the teacher is not likely to impress the youth of 1923 as a style on which to model his own.

After the incomplete sentences—the result of Latin too difficult for certain pupils—were discarded, an attempt was made to classify three hundred translations as to correct and effective English. In one category were placed all sentences that convey no reasonable meaning, such as the following:

So much did I accomplish when you were repulsed by the consul as an exile you are able to ruin the republic and to vex the consul and that this crime committed by you should be called piracy rather than war.

L. Lucullus was able to remedy a part of this grave war and disaster by your united order, part of the army was sent away and part handed over to M. Glabrio because you follow the manner shown by the example.

Even with allowance made for punctuation, it is difficult to believe that the pupils who wrote these sentences knew, or were trying to convey, the meaning of the Latin text. Certainly what they presented as translation is not in any sense acceptable Eng-

lish. Thirty-four per cent of the three hundred complete translations were of this type.

In a second category were placed what may be called sentences of "translation English." These convey some sort of sense, but they are awkward, involved, or not idiomatic. Of this type there were 120 specimens, or 40 per cent of the whole number considered. The following are examples:

> Will you discover him to be an enemy, whom you see to be about to be the leader of a war, which commander you feel to be waiting in the camp of the enemy, the author of crime, the leader of a conspiracy, the summoner of slaves and abandoned citizens, permitted to go out that he might seem not being sent from the city by you but sent into the city?

> Consider what you think ought to be done, because two most powerful kings joined together, renewed the provocation of the nations, and undertook to exciting of the tribes and to even receiving our new commander to incite the army.

> For when the forces of the enemy had not been far away, nevertheless if no breaking down was made, then grazing was left behind, the culture of the fields was deserted, navigation of the merchants sleeps.

It is not always easy to distinguish between sentences of no meaning and sentences of "translation English," nor is it necessary for the present purpose to do so. Neither type can increase the appreciation of good English or stimulate and promote its use. The authors of this article differ in a number of instances as to which of the two classifications a sentence should have, but they agree in estimating that approximately three translations out of four presented by pupils after assignment and preparation either convey no meaning or else convey meaning in such a manner as assuredly to do more harm than good to English expression.

Further study was made of the errors in the sentences. Among these errors are disagreement of subject and predicate, especially when separated, wrong case of pronouns, and confusion of adjectives and adverbs—mistakes common to the youth of America. What concerns us here is that there are many other errors not common in speech or writing but induced by translation. These are especially gross violations of the sequence of tenses, unnecessary and

unjustifiable shifts of tense, inaccurate use of prepositions and conjunctions, redundant subjects, and double comparison of adjectives—e.g., more dearer, most severest. Such induced errors, together with direct translation of Latin idioms, in so far as they affect the normal expression of young people, do more harm than good.

Some study was given also to the composition of sentences for effectiveness, especially with reference to the placement of modifiers. But so little attention was paid to this matter in the classes visited and the translations evinced so little concern by the pupils for anything beyond the rendering of the gross meaning in any form whatever that no quantitative conclusions were reached. Only six of the three hundred translations were judged to be in impeccable English.

All of the translations secured—or heard, for that matter—were of small units, usually one sentence. To show the effect of the translation of a whole assignment by this method, the following composite is presented. It is taken verbatim from the test papers written at the beginning of the period, groups of the pupils being required to render different parts of the assignment.

Pupil A: Wherefore, fellow citizens, since a thanksgiving was decreed to all the shrines, celebrate these days with your wifes and your children. For often many due and just honors have been proclaimed to immortal gods, but never indeed more justly. For you have been snatched from the most cruel and wicked destruction.

Pupil B: without slaughter, without bloodshed, without an army, without fighting, you have conquered with me alone as togoed leader and general. Moreover, Romans, remember that all civil dissensions, not only those, which you hear, but also those which you remember and saw.

Pupil C: C. Marius a watchman of the city, was thrown by him from the city, and many other brave men part thrown out from the State, the others killed. Cn. Octavius consul threw out his colleague from the city; the whole place here was heaped with dead bodies and the blood of the citizens. He gained the upper hand after Cinna with Marius.

Pupil D: then indeed the most famous men were killed and the lights of the state were extinguish. Afterwards Sulla avendged the cruelty of this victory. I ought not mention how great the lessening of the citizens and how great a calamity to the state. Marcus Lepidus quarreled with Quintus Catulus a most famous and brave man; his death did not bring as much grief to the state as the death of others.

Pupil E: And nevertheless all these dissensions of such a character which pertained not to the distinction but to a change in the republic. These neither wished there to be no republic, but in that which was they themselves wished to be chiefs nor did they wish to burn this city they wished to flourish in this city themselves.

Pupil F: And, nevertheless, all these dissensions which he sought for the extinction of the republic were of this kind; not for the restoration of good feeling, but for the killing and perscribing of the citizens. In this greatest and most cruel war since the memory of man, in which war he fought, not with barbarians, but with his own kind.

Pupil G: In which war the law was made by Lentelus, Catiline, Cethegus, Cassius, that all, who could be solvent while the city was safe, were considered in the number of the enemy, I had arranged in such a way, O Romans, that we shall all be saved, and, when the enemy thinks only so many citizens remained, as much as resisted the infinite slaughter, so much of the city, as the flames were not able to destroy would remain, I saved both the city and the citizens unharmed.

As a further illustration of the translation of a continuous passage, the two following excerpts, chosen as representative, are quoted from the notebook of a pupil who was certified as having satisfied the requirements for entrance to college:

Over some of whom I trust fate hangs, and punishment has already long hung over the dishonesty, vileness, crime, and wanterers of debt of others or is already at hand or certainly approaches. Those if they destroy my consulship, inasmuch as they are not able to remedy it not some short time but will add many generations to the state. For what we shall fear is a people, with no leader who is able to wage war against the Roman people. All troubles abroad are pacified on land and sea by the virtue of one: the domestic war remains, there is treachery within, the peril is shut within, the enemy is within. With luxury, with madness, with crime, we must struggle. I volunteer to be leader of this war, fellow citizens; I bear the enmity of the lost men; who are able to be cured, I will cure whatever malady, who when cut away will not be allowed to return to mischief to the state. Hence either they go out or they are quiescent or, if they are in the city and continue in the same mind, they will await that which they deserve.

These things even I neither promise by my prudence nor by depending on human plans, to you, fellow citizens, but by the many and not irresolute signs of the immortal gods, I am led on by these leaders in this hope and feeling; who already not at a distance, as they were accustomed formerly, from an external and distant enemy, but by these presentements they will defend by their divine power and aid their temple and the buildings of the town. You ought, fellow citizens, to invoke, to worship, to supplicate them, so that they

will wish this city to be most beautiful, most flourishing, most powerful, they will defend it, from all forces of the enemy on land and sea, from being captured by the nefarious crime of the desperate citizens.

There is no reason to believe that the fifteen schools which contributed to this study are inferior to the average of the country. On the contrary, there is evidence that they rank high by general standards. Certainly, as eastern schools, they give to Latin a more important position in the curriculum and a greater emphasis than do less traditional schools in other parts of the country.

It is not a question now of what Latin can do. Personally, the authors of this article believe that Cicero can be so taught as to make a marked contribution to the appreciation of good English. But, in the third year of Latin in fifteen schools which are believed to be typical, the evidence is overwhelming that the translations are likely to do far more harm than good to English. "Many are the thyrsus-bearers, but few are the inspired."

What adjustments are the friends of Latin prepared to propose in the light of conditions as they are?

INSTRUCTIONAL SUPERVISION WITH THE ANNOUNCED VISIT AS AN IMPORTANT FACTOR

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It is generally recognized that good work in the schools is directly proportional to the effectiveness of supervision and that vital, efficient, and inspirational supervision of school work is a necessary and essential part of any complete educational program. It is necessary, therefore, for every superintendent not only to employ the usually accepted modes of supervisory procedure but also conservatively to try out new ones.

The first essential to success in this field, as in any other, is to have a clear-cut definite program. Too many supervisors follow shifting programs, depending largely on the inspiration of the moment. As a result, supervision is sometimes objectionable as well as of questionable value. The program must be not only definite for the superintendent, but equally well understood by every teacher.

With the broad purposes of education in mind and with the understanding that every superintendent has important administrative duties that bear directly on these purposes, it will undoubtedly be admitted that the chief and immediate purpose of supervision is to improve or to maintain a high standard of classroom instruction. To accomplish this, five essential conditions must be realized: (1) a high-grade teaching corps must be secured; (2) superintendent and teachers must recognize and establish definite goals of attainment in all subjects; (3) help and direction must be given in the attainment of the goals established; (4) results must be tested and checked in order that attainment of goals may be definitely known; (5) co-operation must be developed between teachers and superintendent.

The first and most important consideration which the supervisor has to satisfy is that of securing a corps of teachers, well trained,

of strong personality, well adapted for their particular positions, and of high moral standards. A supervisory force is entirely justified in taking plenty of time in seeing to it that the teaching force is chosen and placed with care. It has been said that when this task is well done, the best half, if not three-quarters, of the task of supervision has been accomplished. However, the tasks ahead are vital. The best teaching force in the world, if it fails to grow or works at cross purposes without direction or common interests, will soon disintegrate.

Providing a strong and helpful course of study is the second duty of the supervisory force. This does not mean that the supervisory force will betake itself apart and set down its dicta in a course of study and hand it down to the teachers. Courses of study provided in this manner never succeed for long. To be successful, a course of study must be alive and growing. It must be subject to certain varying adaptations. Every year ought to see growth and development, a sloughing off of old worn-out material, and the addition of new stimulating material or method. The whole teaching force can and will be of very great assistance in developing a course of study if the directing forces are wise enough to know how to give them the opportunity. Because a course of study is and must be such a growing organization of material and method, it is difficult to provide it in printed and bound form and keep it up to date. Some practicable way should be found to provide it in loose-leaf form. But whether this be done or not, constant attention to the growth and adaptation of the course of study must be given by the whole teaching force. It is the duty of the supervisory force to give direction to this.

The course of study should be a daily handbook for every teacher. It is expected that the teacher will not only know but apply every usable suggestion made in the course of study relative to his work.

If supervision is to be effective, both supervisors and teachers must have common knowledge of what each is to expect of the other. So important is this condition considered to be by many authorities that they call it a cardinal principle. Too often it is taken for granted that this common knowledge is possessed by both supervisors and teachers. In most instances both groups have read or

studied the necessary material to provide a common basis of thinking, but this theoretical material is not always well understood, despite actual practice in normal-training classes. This common knowledge must become "working capital" and not "hidden treasure." It is the most difficult, but perhaps the most important, task of the superintendent to set up the basis of common understanding.

The customary mode of procedure, after getting the schools under way, is for the superintendent to begin a series of unannounced visits. If he is wise, he will do everything possible to put the teacher at her ease. But no matter how skilful he may be, it is impossible by this method to shake off the character of an inspector.

It is a common experience for supervisors to discover that their presence in a building is quietly announced through the building by the passing of a perfume bottle or some other equally suggestive article. This happens despite the fact that the superintendent may be well liked. The sort of supervising possible under such conditions may be—although it is often not—definite for the superintendent; it certainly is anything but definite or inspirational for the teacher.

It is the contention of the writer that supervision can never succeed on the basis of inspection. The purpose of supervision is not to discover teachers' faults or weaknesses. The real purpose of supervision is to stimulate the teacher to a maximum of self-improvement. Suggestions, no matter how good or how skilfully made, never function well except when they grow out of the teacher's own consciousness of the need for them. This means that a teacher must be able to discover not only her own faults or shortcomings but also the remedy for them. The superintendent performs a real service when, and only when, he creates conditions that make it certain that the teacher will exert herself to the limit of her ability to secure the maximum results from her teaching.

Because we felt that the foregoing statements set forth some very fundamental considerations and because the customary method of schoolroom visitation apparently defeats the realization of these considerations, we instituted a change which we believe takes

supervision out of the field of inspection and puts it into the field of instruction.

The plan is to give the teacher written notice of the exact day and hour of the superintendent's visit, naming the class to be visited and specifying the particular points to be stressed during the visit. This appointment is made with the teacher's schedule before the superintendent so that the school procedure for the day will not be interfered with in the least.

This is not altogether a new procedure, though it is far from the usual. Professor M. S. Pittman, of Ypsilanti, Michigan, used this method in his experiment in Brown County, South Dakota, in 1919–20. His visits, however, were not arranged in accordance with the school schedule. We believe that the visit should be timed with the schedule in order that the work may be done under as nearly normal conditions as possible.

In order to give this procedure a real test, we chose what we believed would be the most difficult field in which to try it out—the junior and senior high school, where some school supervisors still maintain that actual classroom supervision either is not needed or cannot be carried on effectively.

We chose also to make the test first on two subjects: (1) the lesson plans and (2) directed study. Lesson-planning—the preparation of definite and specific written plans not only setting forth the teacher's and pupils' aims but separating subject-matter and method with proper emphasis on the assignment—while usually admitted to be desirable, is not generally practiced in high schools. The same is true with respect to directed or supervised study, because very few teachers as yet know how to organize such activities.

The plan was instituted by sending a letter of the following type to all teachers to be visited.

On ——— I expect to visit the ——— School and will visit your class in ——— which recites the ——— period.

I am especially interested in observing two phases of the work; they are as follows: (1) the lesson plan and (2) directed study.

I hope that you will find it convenient at that time to give me a copy of the plan of your recitation which I may keep for future use. This plan need not be made especially for this recitation. The plan for the entire unit of subject-matter (See handbook on *The Lesson Plan*), of which this recitation is a part, is what I want.

I wish that on this occasion you would divide your time approximately as follows: first two-fifths of the period—recitation; next one-fifth of the period—assignment; and last two-fifths of the period—directed study.

The plan for the assignment and directed study should be a part of your lesson plan and should be carried on in accordance with some recognized method. See handbooks *Directing the Study of Pupils* and *The Lesson Assignment.*

My visit is, of course, conditional upon several factors, such as (1) health and (2) unavoidable changes in plans.

Looking forward to seeing some very good work, I am, ...

While this letter does not announce it, a conference is commonly called of all teachers in the building immediately after school on the day when the visiting is completed. At this meeting, immediate problems and difficulties are discussed. This meeting is not allowed to extend beyond one hour, although the teachers are often so eager and interested that it is difficult to keep within the time.

After the visits in any one building are completed, the superintendent makes a written report of his observations and suggestions, three copies of which are made, one for his own file, one for the principal of the building, and one for the teacher. This report is sent out within a few days and may be followed by a further conference requested by either the teacher or the superintendent. Samples of both commendatory and critical reports, just as made and sent out, without the knowledge of anyone that they were to be used in this paper, follow:

COMMERCIAL LAW

1. *The lesson plan.*—(*a*) The aim: The aims are well stated. The pupil's aim, while less detailed than the teacher's aim, is nevertheless clear and definite. Should this aim be stated to the class in the assignment, or should the pupils be allowed to discover it in the supervised-study period? If so, what checks might be used to make sure that the pupils have actually found the proper aims? (*b*) Subject-matter: This is very general, but details are unnecessary unless the subject-matter is very involved. (*c*) Method: Possibly the method might be more specific. For example, a few pivotal questions on which the whole question of bailments turn might help to see that the pupils really had accomplished the objectives set forth or developed in the assignment.

2. *The assignment.*—This was very specific. Again, one might raise the questions: Should an assignment be motivated? Should objectives be set forth by the teacher or developed by the class?

3. *Directed study.*—The teacher called attention to some of the rules and fixed these by applying the lesson of "Atlanta's Race." If a few of these rules

are discussed from time to time, it should aid materially in developing good study habits. These rules should then be applied specifically to the study and the results checked by the teacher.

HOME ECONOMICS

1. *The lesson plan.*—The plan is satisfactory from every point of view. The aims of the teacher and pupils are unusually well stated. The subject-matter and the method are admirably worked out. This is one of the best lesson plans the writer has seen.

2. *General comments.*—(*a*) The technique employed was very successful. The pupils were led to discover the next step without being told beforehand by the teacher. Reasons for doing things were especially well treated. (*b*) The class was attentive, and the pupils showed skill in carrying into effect the directions developed as a part of the project. (*c*) The idea of grouping the various phases of attractive clothing into one project seems a very good one. (*d*) Without a doubt, this work as it is being carried on is a credit to the school and to the community. (*e*) The following material ought to be helpful in the department: (1) meat charts, Wilson & Co., Union Stock Yards, Chicago, Illinois (gratis); (2) the *Homemaker's Bulletin*, Household Products Distributing Co., 7 West 22 Street, New York City, New York (gratis); (3) posters on the value of milk, etc., National Dairy Council, 910 Michigan Avenue, Chicago, Illinois (gratis); (4) Longworthy charts, United States Department of Agriculture, Washington, D.C. ($1.00 per set).

Not all reports are so complimentary as the two given. The following is of a different type. The recitation was a study of some "short methods" of multiplying and dividing.

MATHEMATICS

1. *Discipline.*—Very good.

2. *Teacher's preparation.*—Very good.

3. *Pupils' preparation.*—Very poor.

4. *Economy of time.*—Too much time was spent in passing out test papers and calling attention to mistakes in them.

5. *Technique.*—This was drill material. It should, therefore, be very rapid. The opposite was the case; it was slow, even though the exercises were easy and designed for sight work, without preparation. The previous assignment and supervised study should have cleared away the difficulties and prepared for the written problems.

6. *Assignment.*—Very hastily made. Even though the problems are a radical departure, no explanation was given on them.

7. *Supervised study.*—No time given for this activity. In the writer's opinion, this section needs a great deal of directing in their study.

Announced visits cannot be introduced without careful preparation both on the part of the superintendent and on the part of the teacher. The superintendent must have made a careful study of the needs of his teachers and must have come to an understanding of these needs. The teachers must understand the motives of the superintendent and realize the problem.

In our own case the need for better lesson-planning and for directing the study of pupils was apparent and recognized by all. Our first step was to prepare two monographs, one on *The Lesson Plan*, the other on *Directing the Study of Pupils*. These were condensed as much as possible and made up into 6×9 booklets of about forty pages of ordinary type. In them was given the best and modern thought on these subjects. Good bibliographies were also included.

Before the opening of school, meetings were held with all of the principals at which these monographs and the references were thoroughly discussed. When school opened, a monograph was placed in the hands of each teacher, and a teachers' meeting in each building was planned for an early date. At these meetings the whole plan of supervision was outlined. Each teacher was given definite suggestions as to how to proceed in attacking his problems in relation to these subjects.

On the question of the lesson plan, the following topics were thoroughly covered as outlined in the monograph:

1. Are detailed written lesson plans necessary?
2. Do teachers ever become so efficient as to make written plans unnecessary?
3. Are lesson plans an unnecessary burden to teachers?
4. When and how often should a lesson plan be made?
5. What material should be covered in a lesson plan?
6. What should be the relation of material to method in a lesson plan?
7. What are the essentials of a good lesson plan?
8. A study of several types of plans.
9. Lesson plans for particular teachers worked out on the blackboard by the leader before and with the co-operation of the group.
10. The assignment in its relation to the lesson plan.

On the question of directing the study of pupils, an even more carefully worked-out plan of study for the teachers' meeting was

arranged. Wherever possible, reference was made to work already done by some of the best teachers in the school district. This plan is as follows:

PLAN FOR TEACHERS' MEETINGS ON DIRECTING THE STUDY OF PUPILS[1]

Aim.—To establish the importance of proper study habits and to find out how to teach pupils to study effectively.

Subject-matter	*Method*[2]
1. The importance of proper study training *a*) The value of ability to reach independent conclusions *b*) The qualifications of a good citizen	1. Discuss W. C. Bagley's statement, "To teach a child to study effectively is to do the most valuable thing that could be done to help him adjust himself to any environment of modern civilized life into which he may be thrown."
2. The meaning of study *a*) Definitions *b*) The origin of thinking (Dewey) *c*) Effective thinking. John Dewey, *How We Think* *d*) The dangers of too much talking on the part of the teacher	2. Define thinking. How does it differ, if at all, from study? 3. What constitutes reflective thinking? 4. Illustrate the various steps involved in reflective thinking, using as the basis of the discussion some schoolroom problem. 5. What percentage of the recitation time should be consumed by the teacher? What evils may result from too much talking by the teacher?
3. The factors involved in effective study *a*) Physical conditions (1) Lighting (2) Seating (*a*) Adjustment of seats (*b*) Adjustment of desks	6. Why are the physical conditions of the study room important? 7. What evils may result from poor lighting? What is the teacher's responsibility in this respect? 8. Give the rules for adjusting seats and desks.

[1] Arranged by Assistant Superintendent H. B. Alberty, Cuyahoga County, Ohio. It is not expected that all of the material suggested in this plan be used in any one meeting. The material that is needed in a particular school system should be emphasized. It is hoped that it will also serve as a helpful study plan for teachers and school officials who desire to make a more exhaustive study of this subject.

[2] Nos. 13, 14, 17, 18, 21, 22, 23, 24, 29, 31, 32, 33, 36, 38, 39, 40, and 41 should be assigned to individual teachers at least two weeks before the date of the teachers' meeting. No. 42 should be carried out by the superintendent or principal.

(*c*) The best type of school desk

(3) Ventilation

(*a*) Natural

(*b*) Mechanical

9. Discuss the following statement: "No ventilating system can possibly be as large a factor in getting good air into the lungs of children as seats which cause them to sit with chests expanded."

10. Count the number of children in your room who are sitting in seats which are not properly adjusted? What should be done about it?

11. Give arguments for and against the movable type of school desk.

12. Is your schoolroom properly ventilated? If not, what have you done about it?

b) Aids to effective study

(1) The library. F. M. McMurry, *How to Study and Teaching How to Study*, p. 74

(*a*) Use of library material in the lower grades

(*b*) Use of library material in the upper grades

(*c*) Newspapers and magazines.

(2) Maps, globes, charts, and material for visual education

(3) Characteristics of a good study hall

13. Is McMurry's discussion on "The Desert" a typical one? What use do you make of the library in supplementing the textbook? Make a list of all of the supplementary books you have made use of during the past week.

14. Discuss "An Extract from a Pupil's Notebook" and "The Influence of Transportation and Methods of Communication upon the Development of the Nation." Mabel E. Simpson, *Supervised Study in American History*, pp. 234–35.

15. What magazines come regularly to your library? Which of these magazines are most used? What other magazines would be of value? How could they be secured?

16. Discuss the following statement from the handbook, "It [the study hall] is [often] simply a place for detaining pupils until the next recitation. The teacher acts as a sort of guard to see that some semblance of order is maintained." To what extent does this apply to your study hall?

c) Clear understanding of aim
(1) The teacher's responsibility. Handbook on *The Lesson Plan*, pp. 6–7
(2) Results of lack of aim and motives. F. W. Thomas, *Training for Effective Study*, pp. 36–65, 73–75

17. Give the substance of the material under "Aim" as found in the handbook on *The Lesson Plan*.

18. Select a unit of subject-matter in modern history and give both the teacher's and the pupils' aims. Should the pupils' aim always be stated, or should the pupils be left to discover it? Why?

19. Discuss this statement by E. L. Thorndike: "Even gifted teachers often, in commendable zeal for interest and economy of time, prepare pupils in advance for every chapter to be read by outlining it, eliminating all difficulties, and accepting the ability to give the substance of the chapter as all that the pupils are to do. The pupils may be left unable to study a book intelligently by themselves. If they had been given problems to work out with its aid that were just within their capacity, they might have absorbed its substance less easily, but would have gained a more valuable knowledge of its relations and uses, and also have had some training in the independent use of books." Is this statement an argument against directed study? Why?

20. Is the case of aimless study cited by Thomas a typical one? Recall from your own experience similar instances.

d) Study motives. Handbook on *Motivating the Work of the Schools*, pp. 3–8
(1) No learning without interest. E. L. Thorndike, *Principles of Teaching*
(2) The "life-career motive." *The Vocational Interests of the Cuyahoga County School District, Grades 7 to 12*

21. Discuss the motives which are potent in *Motivating the Work of the Schools*.

22. Select a project in general science and show how it may be motivated by appealing to the interests of the pupils.

23. Discuss the advantage of knowing something of the vocational interests of your pupils. (See survey re-

(3) Negative incentives

ferred to opposite.) What can you say of the permanence of these interests?

24. Make a vocational survey of your own grade or room and show how it may be used in motivating study.

25. Discuss threats of failure and punishment as proper study motives.

e) Efficient methods of study

(1) Summary of rules for effective study. G. M. Whipple, *How to Study Effectively*

26. Discuss methods of teaching these rules for effective study to the pupils. Could they be made a part of the work in English? Would it be possible and feasible to have these rules printed or mimeographed and placed in the hands of every pupil?

4. Directing the pupils' study

a) General methods of directing study

(1) "Principles and Rules of Effective Study." F. W. Thomas, *Training for Effective Study*, pp. 207–11

27. Is it sufficient merely to teach the pupils the rules for effective study? Why?

(2) The value of an outline

(*a*) "A Plan for Supervised Study in Eighth-Grade History," submitted by Helen Muraski, Strongsville

28. Compare the rules as set forth by F. W. Thomas and G. M. Whipple as to application to your particular problems.

(3) The value of listing questions which are answered by the text

29. Take a unit of subject-matter in literature and show which of Dr. Thomas' rules may be applied by the pupils in preparing it.

30. Discuss Miss Muraski's plan for supervising eighth-grade history. What are the dangers to be guarded against in such a plan of procedure?

31. Select some teaching unit in geography and show (1) that a thorough understanding of it can be had only by discovering what questions the author is attempting to answer and (2) how you would guide the pupils in framing these questions. F. W. Thomas, "Teaching Pupils to Frame Questions for Study," *Training for Effective Study*, p. 43.

b) Supervising the various school subjects

(1) G. E. Rickard, "Directions to Pupils for the Study of History"

32. Why is it necessary for the teacher to develop a specific technique for directing the study of different subjects? See J. W. Heckert, "Effects of Supervised Study in

(2) Mabel E. Simpson, "The Slavery Question," *Supervised Study in American History*, p. 183.
(3) Alfred Hall-Quest, "Lesson Plan in Evangeline," *Supervised Study*, p. 368
(4) Giving individual help to pupils as a means of directing their study

English Composition," *Journal of Educational Research*, V (May, 1922), 368–80.

33. Read chap. ii, *Supervised Study in American History*, by Mabel E. Simpson, and discuss: (*a*) the unit of recitation; (*b*) the nature of each part of the unit; and (*c*) the daily program or time schedule for each period. Could this plan be adapted to your needs? Try out this plan for one week and note the results.

34. Discuss the time allotment for the review, the assignment, and study in the specimen lesson on "The Slavery Question." Are study and assignment of greater importance than the so-called recitation? Give specific reasons for your answer.

35. What relative amount of time should be given to the various parts of the "Lesson Plan in Evangeline"? Justify your answer.

36. Are the problems for the study well stated (*a*) to observe certain details that contributed to the quiet happiness of the Acadian farmers; (*b*) to examine some of the means by which the poet presented his pictures? How could the teacher develop the suggested answers without helping the pupils too much? If possible, try out this plan and note the response of the class. Report to the group or present the work with pupils at the teachers' meeting.

37. How much individual assistance should a teacher give pupils in individual study? How do you help them and yet develop self-reliance? Give specific instances.

5. The organization of the school for directed study

38. Read and report on "Directed Study," by A. W. Burr, *School*

a) Arguments for and against directed study
b) Directed study in the primary grades
c) Directed study in the junior high school
d) Directed study in the senior high school

Review, XXVII (February, 1919), 90–100.

39. Read and report on "Measured Results of Supervised Study," by Frederick S. Breed, *School Review*, XXVII (March and April, 1919) 186–204, 262–84.

40. Read and report on the chapter on "Supervised Study" in *An Introduction to High School Teaching*, by S. S. Colvin.

41. Read and report on the chapter on "Supervised Study" in *Junior-Senior High School Administration*, by C. H. Johnston, J. H. Newlon, and F. G. Pickell.

42. Carry out Project 5 in *Projects in Observation and Practice Teaching*, by H. H. Hahn, and report to the group.

43. What can the primary teacher do in directing study?

44. Report on the arguments for having the study period following the recitation: *Fundamentals of the Daily Program* (Cuyahoga County Public Schools) pp. 20–21.

45. Suggest a suitable time allotment of a 45-minute period in junior and senior high schools. H. S. Philips, "Report of a Committee on Junior High Schools, Denver, Colorado," *Elementary School Journal*, XXIII (September, 1922), 13–24.

46. Give the arguments for and against the 80-minute period as discussed in the handbook. How would this plan work in your school?

47. What modifications in your classroom procedure have you made as a result of your study of this handbook?

With this careful study as a preparation and background, the teachers were not only ready to do some good work but so thoroughly appreciated the problem that the question of supervision was almost entirely forgotten in their earnest and enthusiastic endeavor to accomplish that which they realized was a very important element in their work. They look on the superintendent as a co-worker equally interested with them in the great problem of education.

It is our firm conviction that we are now getting and having used in our schools better teaching plans than is usual. We know that they are much better than the majority found in print. Of course, not all are good, but at least 50 per cent are very acceptable, and another 40 per cent are superior. This leaves a bare 10 per cent below standard.

VOLUNTARY SUPPLEMENTARY STUDIES IN NUTRITION

MATA ROMAN
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The work given at the University High School of the University of Chicago is organized according to the unit plan. Each unit includes two types of work. The first is made up of minimal essentials, a body of ideas and attitudes, which must be mastered by each pupil before he is considered ready to pass to another unit. These minimal essentials are so graded as to be within the compass of the average student. The second type of work is provided for those students who would not be progressing at their maximum rate if only minimum essentials were studied. Special projects are listed for such pupils to choose according to their chief interests. Wherever it is possible, through pedagogical maneuvering, they are allowed to choose the projects spontaneously. In some cases the pupils themselves suggest lines along which they wish to investigate. These projects should depend on previous intellectual achievement in the minimal essentials and develop powers which are evidence of capacity for independent study apart from the constant guidance and constraint of the teacher.

In a nutrition class consisting of twenty junior and senior girls, projects of various kinds were developed. Clara kept an accurate, detailed account of all of the expenditures for food in her home over a period of two months. She analyzed these expenditures and compared them with standards. She also studied them with reference to the protein, mineral, and vitamine needs of her particular family. Her conclusion was that the expenditures for meat were too large, the expenditures for cereals too small, and the expenditures for dairy products, fruits, and vegetables, while apparently a little large, were probably wisely apportioned.

Eunice made a survey of the health habits of a four-year-old sister, weighing her daily, keeping account of all the food she ate, the length of time she slept, and her exercise. She analyzed her food as to adequacy for a child of her age and plotted a weight chart with one graph for the actual gain and one for the expected. Since her sister was a perfectly normal child, having intelligent care in every way, Eunice was unable to do more than point out that the satisfactory showing on the weight chart was largely due to the specific items of care and nutrition.

Mary and Jane were both much overweight. Their special problem was to determine the exact number of calories of food, containing the requisite amounts of all of the body-building elements, which would allow a gradual and harmless reduction of their respective weights. Their charts and analyses of foods eaten showed that they were accomplishing the desired end.

Frances and Genevieve had a joint problem, discussed in separate papers—a nutrition experiment with two young rats of the same size and age, one of which they fed on crackers and water, the other on crackers and milk. They kept a chart of the respective growths and health symptoms of the two rats. At the end of twenty-six days of feeding, they chloroformed the rats and took out the skeletons. These skeletons exhibited rather startling contrasts. The first rat which was fed on crackers and water was decidedly rachitic, and the skeleton showed a convincing lack of growth and calcification as compared with the rat which had been fed on crackers and milk. In their papers the girls analyzed the diets of the two rats and accounted for the various symptoms exhibited by the rat fed on crackers and water, namely, the early evidences of xerophthalmia which were quite apparent, a clear case of rickets, a lack of growth and calcification, and a small amount of muscle. By comparing the age at which maturity is reached in rats and in human beings, they decided that the rats had reached the age which would be comparable to eleven years in a child. There was no shadow of hesitancy in the recommendations which they made as to the feeding of children.

Bertha and Helen induced polyneuritis in two pigeons by feeding them polished rice and water. They recorded the amount of food taken daily, made careful observations of symptoms as

they developed from day to day, satisfied themselves and their classmates that the pigeons really had characteristic symptoms of polyneuritis, and then applied the remedy previously selected as the most effective. After feeding the pigeons on yeast followed by mixed whole grain, they observed the almost spectacular recovery and incorporated the whole experiment in papers illustrated by drawings and graphs. The applications made to the nutrition of human beings left no doubt that these young experimenters were deeply impressed with the dangers of improper diet. Their manner of expressing their convictions evidenced a will, not only to select their own food with care, but also to be enthusiastic advisers of friends unfortunate enough not to know what to eat.

A problem which was particularly good because it was a practical application of a large portion of the previous work was a survey made by five girls of the lunches eaten by the high-school girls in the school lunchroom and of the candy bought in the University Bookstore during one day. The dishes concerning the food value of which there was any doubt were taken to the laboratory and studied. The recipes used were given to the girls by the head of the lunchroom. From these data the girls agreed on the value in all respects of every dish served. They analyzed the lunches in detail, dividing the 137 lunches among the five girls. In addition, they compiled the following data:

Percentage drinking milk	24
Percentage drinking cocoa	9
Percentage eating ice cream	42
Percentage having milk in one of the foregoing forms	65
Percentage having a hot dish	72
Percentage consuming less than 200 calories	4
Percentage consuming between 200 and 400 calories	23
Percentage consuming between 400 and 600 calories	40
Percentage consuming more than 600 calories	33
Percentage eating a vegetable	51
Percentage eating a fruit	24
Percentage eating both a vegetable and a fruit	15
Total number of lunches analyzed	137
Number of girls in the high school	269
Number of girls buying candy	89
Average amount of money spent	$0.15
Average number of calories consumed per person	400

Each girl took one phase of the discussion and gave conclusions. Ruth found the percentages and discussed how far they represent desirable choices. Louise wrote an article for the school paper, setting forth the results of the diet study and suggesting changes. Mary selected several lunches that she considered poor, discussed them in comparison with the standard previously agreed upon by the group, and gave suggestions for changes. Harriet selected a number of good lunches and told why each was good. Martha analyzed the candy data and stated that the consumption of candy per individual was too great, presenting a scientific basis for her judgment. She also wrote an article for the school paper.

When the reports of the students are completed they are bound and regularly accessioned in the high-school library where they circulate among the students and can be seen by visitors.

The successful development of these projects presupposes knowledge of the elements of nutrition. Should a girl start such an experiment or study and not be well grounded in the minimal essentials, the natural demand which the problem makes sends her to the literature or to her teacher for explanations which come at a time when intellectually she is in a perfect learning attitude. In addition, investigation of special phases of nutrition, which are so detailed that they cannot be studied by the whole class, is made possible in the case of individual students.

The more than satisfactory results secured through the projects here mentioned seem to point to two conclusions: problems which are of the nature of research appeal to high-school students, and high-school students can do work more exacting than we sometimes give them an opportunity to attempt.

THE HIGH-SCHOOL TEACHER AND ATHLETICS

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After a period of more than ten years spent in more or less intimate contact with high-school athletics, the writer feels that here exists a grave and ever increasing problem. Every year larger numbers of students engage in intensive contests, witnessed by crowds of excited spectators often numbering thousands. Every year more money is paid to expert coaches; in extreme cases a man able to coach football, basketball, and track commands a higher salary than the best trained and most successful high-school teacher. Listen to the conversation in the home room or in the lunchroom, or turn the pages of any high-school annual, and you have forced upon your attention the predominant and almost unique importance of athletics in the life of a modern high school, especially if it is a large high school.

With this intensive development, certain evils have become far too common. Rivalry between certain schools has become so intense that players meet in a spirit of hatred and revenge, and special policing is necessary to guard against outbreaks of hostility between rival rooters. Very naturally, along with this goes an exaltation of, and a seeking after, athletic prowess that smacks of professionalism. In certain cities in Ohio it is common knowledge that many athletes attend school periodically and only for special sports. They are never ineligible, and some of them have been in high-school athletics for a long term of years, shifting from school to school in order to conform to the letter of the rules. As a result, some of the teams develop almost collegiate skill and strength, with a "win-at-any-price" attitude which makes it unsafe for a bona fide lighter high-school team to encounter them. And to their shame, more and more of our colleges have taken to scouting for high-school athletes of promise and to luring them by well-concealed proffers of payment or advantage which

tend even more to undermine the amateur attitude in our high schools of sport for sport's sake.

If this evil prevails, why not curtail or eliminate secondary interscholastic athletics entirely? If athletics are properly directed and supervised, the benefits will far outweigh any incidental evils. If we conceive of secondary education as the preparation of the adolescent for a richer and more efficient life, in proper adjustment to the social relationships of our modern world, surely no one factor is more worth while than participation in well-directed, sportsman-like athletics. Not only is the strenuous exercise, usually out-of-doors, the best means of developing physical vigor and endurance, but a successful athlete must continually call upon the mental initiative, resourcefulness, and penetration so essential to later success. In no other way can a boy or girl come into closer and more vital association with groups of individuals working toward a common end and learn the paramount lessons of co-operation and leadership. Of greater value than all of these is the possibility of stimulating to lasting dominance those highly desirable qualities of the true sportsman—self-control, unswerving loyalty, self-effacement, and team-play. What does modern society need more in its men and women of outstanding worth—its leaders?

But, you say, such an effect of athletics is but a theoretical day-dream. Not in all cases. I have seen on our high-school teams many a boy with the characteristics mentioned whose name is written very high on the honor rolls of valor and achievement in the late war. Such results in any large number of cases, however, require a concerted facing of responsibility for this line of activity on the part of all high-school teachers and administrators. So great a power for good is also, as already indicated, a potential source of much evil, and the choice lies almost entirely in our hands.

At this point some teachers may be wondering in just what concrete ways it is best to manifest their interest. There are three ways in which all instructors may keep in close touch with the athletic life of the school. Most essential is faithful and enthusiastic attendance at the games, rallies, and banquets. As a natural result of this comes the habit of keeping informed as to the prospects of different teams and the merits of the players by questions

and friendly conversation outside of the classroom. It is possible to interest one's self, in a perfectly legitimate way, in the scholarship and eligibility of various athletes, spurring them to greater effort for the sake of the team and the school. Many teachers, also, will be fitted by temperament to aid in rousing and maintaining a healthy, loyal school spirit, co-operating in the choice of yells, songs, or distinctions and in the supervision of rooters' clubs. Just as important is the steady encouragement after a defeat to guard against reaction and a loss of morale.

True, such a program, even in part, requires no small amount of time, but the possible benefit to an earnest teacher is more than recompense. In the first place, he will find a point of contact with adolescent life, its ideals and attitudes, scarcely possible in any other relation. This understanding and the knowledge of such mutual interests will bridge the traditional and tragic gulf so often apparent between teacher and pupil. But best of all is the possibility of carrying this frank spirit of co-operation, born on the field or in the bleachers, into the all-important school relations of work and discipline. If I may be permitted a personal digression, I know with certainty and from experience that such a relation as I have described may effect a marked improvement in effort and achievement in a subject as exacting as physics. And, just as surely, it has lightened remarkably the burden of home-room control and study-hall duty, because the prominent athletes and natural leaders were ready to play squarely and help wherever necessary.

But from the standpoint of the school itself and its sports, the returns are even more tangible. A great school is characterized, not so much by fine buildings or equipment, or by an efficient and scholarly corps of teachers, as by that which alone can make these of avail—an ardent, healthful school spirit. Yet nothing seems more tragic than a wild and spurious, often malignant, development of athletic enthusiasm, unguided and unshared by the natural guardians of school life—the teachers. On the other hand, their hearty inclusion in this stirring of the inner life of the school may well mean the growth of a warm attitude of mutual co-operation, tending to solve in the finest way many problems of discipline, of

stimulation, and of progressive dependence on the student-body for help in its own government.

I am certain that in no other direction is there such hope of an effective, yet voluntary, attack on two of the gravest problems which we must face—the suppression of the high-school fraternity and its concomitant evils and the elimination of cheating in any form by high standards of honor and sportsmanship. There is no better antidote for extreme and venomous partisanship in interscholastic contests than the wise and friendly influence of sympathetic teachers. Let all strive to win with every fiber, but let all remain good sportsmen and good friends, win or lose. In the same way, we may continually check and combat the insidious approach to professionalism in the scouting of some misguided college adherents and in their really dishonorable inducements to attract athletic leaders. Fully as important as any of these results is the extension of the benefits of athletic games to a much larger proportion of our school population, both boys and girls, through the intelligent interest and encouragement of the teachers and the promotion of intraschool and interclass contests.

But, over and above the effect on the teacher, or on the pupils as a group, is the influence on the life of the individual pupil, whether he is athletic or not. As has been shown, a real and concerted assumption of this responsibility should bring the many values of athletic activity to a far greater number of boys and girls, either through actual participation or through a share in the group enthusiasms.

Perhaps no individuals are in greater need of aid than the athletes themselves, with their notorious tendency toward overemphasis on the physical and neglect of the mental. The best possibility of improvement for many of them is through concerted action on the part of several teacher-friends in an attempt to lift them to higher planes of effort and aspiration and through a mutual sharing of interests and hobbies. This may well lead to an ever fuller development and realization, in the athletic life of the school and in the inner consciousness of many boys destined to leadership, of the finest and most worthy qualities of the true sportsman, namely, self-effacement and unquestioning team-play, loyalty

at all costs to the school and its ideals, and the conquest of temper and self for the common cause. We must not leave these duties to the coaches. Some are incapable of appreciating them, while others, however willing, are unable to fulfil them either because of lack of time or because of limitation of temperament.

As many doubtless realize, there is another side to this utopian picture. There are some real dangers inherent in the very success of such a program. No countenance must ever be given to any attempt, by teachers or pupils, to bring about unfair discrimination or a lowering of standards in order to drag unworthy, though valuable, athletes to eligibility. On the contrary, the quickening of loyalty and group spirit must be utilized to maintain, or even elevate, the standards of scholarship and conduct for the sake of the school.

There is also the danger of discouraging the less robust and athletic pupils. They may feel that their efforts and achievements are of relatively small value. We must be careful, therefore, to emphasize the equal value of other extra-curricular activities and to insist always on the paramount importance of the work of the classroom and of scholarship.

From the point of view of psychology, we must recognize the injurious effect on the adolescent of overstimulation, even of the finest emotions, with no adequate expression or outlet. Let us be certain that every boy and every girl may find some definite and conscious channel of loyal service to school and fellows in other lines of activity and in sharing responsibility for the school. This very spirit of group loyalty may even lead to a broadening horizon of allegiance to community and nation. Another emotional peril is that of a deadening and depressing reaction after defeat. It is very difficult for any of us, especially high-school pupils, to realize that the game is the important thing and that honorable defeat is no disgrace. At no time can one get closer to the hearts of the boys than in the team room after an unexpected and crushing defeat.

Surely, no greater problem, no finer opportunity and call to service, confronts the teachers and administrators of our American schools, especially those of secondary rank. The very life and

character of the leading men and women of tomorrow depend, in no small degree, on the way in which we accept the challenge. Again, I appeal earnestly for a general and unselfish facing of the issue and for a trial of the program of co-operation and influence here outlined. Most of us in these days, either willingly or by the pressure of popular demand, are committed to a policy of ever extending vocational education. But, in a broader sense, what vocational education holds forth greater promise of a worthy life of attainment, of good citizenship and leadership, than these absorbing activities of gridiron, diamond, or track when lifted and directed to the high planes of good sportsmanship and team-play? Fortunate will be the business, the office, the state, or the army in which the men and women of the future play the game of life in that same way, fairly, but trying with every ounce of strength and will to accomplish each task and bring real success and honor to all!

Educational Writings

REVIEWS AND BOOK NOTES

Experimental education.—William A. McCall distinguishes three types of educational research—descriptive investigations, experimental investigations, and causal investigations. Descriptive investigations, which involve the determination of central tendencies, variabilities, and correlations, are dealt with in his book entitled *How to Measure in Education*. Experimental and causal investigations are treated in a companion volume.[1]

This book begins with good general suggestions on the selection, planning, and formulation of experimental problems, with more specific suggestions for a bibliographical survey and historical summary. Three experimental methods—called the one-group method, the equivalent-groups method, and the rotation method—are discussed in some detail, and criteria for a choice of methods are set up. The safeguards necessary in the selection of experimental subjects and the equating of groups by chance, by general ability, by initial status in the experimental trait, by composite of several tests, by preliminary rate of growth, by multiple bases, and by the A.Q. or F. technique are clearly pointed out and illustrated. The control of experimental conditions and the elimination, equation, or measurement of irrevelant factors lead to a discussion of various errors due to the bias of experimenters, the bias of assistants, the differences in teaching skill, the bias of subjects, the differences in time allowance, the differences in transfer, the bias of tests, and the bias of other irrelevant factors.

A long chapter on experimental measurements lists twenty-five criteria for evaluating and constructing tests, with critical observations on four scaling methods—T scale, age scale, percentile scale, and grade scale. The grade-scale method is regarded as the least satisfactory, while the T-scale method is considered the most satisfactory. Many students of education will question the validity of Table 5, purporting to set forth objectively the relative values of the various scaling methods, and the legitimacy of including it in a book on measurements. The method of constructing a B scale, which measures brightness or ability relative to age, and a C scale, which measures ability relative

[1] William A. McCall, *How to Experiment in Education*. New York: Macmillan Co., 1923. Pp. xiv+282.

to grade and indicates a pupil's correct classification, is described step by step. These scales have not been described before.

Three long chapters, devoted to the models for computations for the three experimental methods, have a multiplicity of symbols so difficult to read that few will ever undertake to read them. The editor's introductory note suggests that teachers without technical training could profitably undertake research with the aid to be gained from this book. That teachers untrained in research would ever wade through chapters vi, vii, and viii is beyond belief.

Causal investigations, though distinguished from experimental investigations, are merely equivalent groups of experiments conducted backward. The essential procedures in the formulation of hypotheses and collection of data for determining causes and the methods of calculating and interpreting correlation coefficients, partial correlations, and regressive equations are set forth in detail. That anyone uninitiated in the mysteries of statistics will be able to follow the brief, though admirable, presentation of partial correlations and regresssive equations is unlikely.

The final chapter lists twenty-eight problems for experiment and suggests the methods and technique to be employed. Some of these problems are interesting and important, but why should such problems as these be presented: "Which is better for pupil growth, a temperature of 68 degrees and a humidity of 50 per cent or a temperature of 86 degrees and a humidity of 80 per cent?" "What effect in securing order will a beautiful picture placed in front of a room have upon an unruly boy who loves art?"

The book is vigorous and forceful and admirable in many respects. Over-indulgence in symbols may deter the general reader and limit the scope of its influence.

V. A. C. HENMON

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Sociology for high schools.—Perhaps no field of interest is receiving more attention from writers and students at the present time than that of sociology and the social sciences. There are many reasons for this which cannot be mentioned in the compass of a review, but a significant explanation is to be found in the lessons on community and national life prepared under the direction of Charles H. Judd and L. C. Marshall during the period of the world-war. The interest aroused in social problems by the war was given definite direction by these lessons. A recent book in sociology,[1] influenced by such material as was prepared by Judd and Marshall, deserves attention both because of the subject-matter and because of the purpose for which it was written. A point of view worthy of emphasis and characteristic of the author is indicated in the following statement:

> This book is not primarily a discussion of social problems. To employ a metaphor, the book treats of social anatomy, physiology, and hygiene, and deals only incidentally

[1] Ross L. Finney, *Elementary Sociology*. Chicago: Benj. H. Sanborn & Co., 1923. Pp. vi+234.

with social pathology. That the teaching of sociology has so heavily stressed poverty, crime, divorce, and other social disorders was doubtless unavoidable; but it is none the less unfortunate. That emphasis has a certain morbid effect upon the minds of young people; it makes them imagine that they ought to be agitators, radicals, reformers, philanthropists, or "social workers"; it tends to fill their heads with queer, half-baked ideas. It may even increase the danger of their failing to function normally in the fundamental relations and institutions of society. That would be disastrous! No amount of reform and agitation could compensate for social disintegration. For these reasons the treatment of "social problems" is incidental in this book [p. iii].

The book shows, moreover, another influence of recent scientific development in education. This influence is observed in the discussion of human nature in the use of data found in the application of intelligence tests to elementary-school pupils. The treatment of sociological problems is simple; the book takes account, in an unusual way, of the development of the social sciences, not by college professors, but by those who are attempting to solve the problem of making social-science material function in the lives of children in their social and civic relations.

One of the healthiest tendencies, in the opinion of the reviewer, is that here and there we have a university professor who is concerned not merely with a scientific study of society but with a scientific study of child nature and the means by which the subject-matter of sociology may influence it in the interest of our common welfare. Professor Finney has achieved distinction in his effort to accomplish this task.

E. GEORGE PAYNE

NEW YORK UNIVERSITY

State geography.—Assuming that the economic geography of a state is the study of the economic adjustments men are making, or profitably can make, to their natural environments in that region, it is logical to expect to learn, at the outset of such a study of Indiana,[1] the uses that men are making of lands in the state and, subsequently, what lands are devoted to each use and why they are so used. Finally, a consideration of future adjustments is pertinent.

To one harboring such expectations, it is disappointing to find that the first half of this high-school text is devoted to the time-honored topics of location, topography, population, mineral wealth, climate, and transportation and that the one survey it contains of a sort which could be used to unify and make geographic the entire discussion not only is meager and general but appears belatedly in the introductory paragraphs of the ninth chapter, at the beginning of the final third of the book, and is in consequence ineffective. By reason, therefore, of the organization of the whole, the early chapters are at best but "near-geography," in spite of the fact that, in connection with each chapter, statements are made concerning general relationships between man

[1] Stephen Sargent Visher, *Economic Geography of Indiana.* New York: D. Appleton & Co., 1923. Pp. x+226.

and the factors of the natural environment under discussion. The descriptions of the state's resources have in places an advertising flavor, but much emphasis is placed on the necessity of using resources wisely.

By far the best part of the book is that dealing with agriculture and the extractive and manufacturing industries. These are shown to have specific bases in natural environmental conditions, and much of the material in the earlier chapters could be made geographic if introduced as needed in the explanation of such activities. In spite of its weaknesses, the book is of much value for use in studying the geography of Indiana, for, besides some geographic "cloth," it offers, as it were, additional warp and woof which users may fabricate for themselves.

EDITH P. PARKER

Real help for the director of dramatics.—The English teacher who finds among the demands on his versatility the obligation of directing school plays, or a drama club, or an elective course in dramatic literature will be grateful for the most recent, and in many ways the best, collection of one-act plays[1] that has yet become available. With secondary schools particularly in mind, the editors of this volume have carefully selected eighteen representative specimens from the wide field of current one-act plays. The plays have been chosen from the literature of England, Spain, France, and America and range in time from Alfred Tennyson's *The Falcon* to such recent works as Kreymborg's *Manikin and Minikin* or Milne's *Boy Comes Home*. The plays are arranged in the text under the three classifications of "Plays of Mood and Character," "Dramatic Episodes," and "Plays of Fancy."

Other features of the book are brief treatises on the one-act play as literature and as a tool in developing English composition and latent dramatic talent. An excellent brief section is concerned with the fundamentals of dramatic presentation, and the book ends with five up-to-date bibliographical working lists. All in all, the volume is one which will interest not only teachers of dramatics but English teachers in general and even teachers of the social sciences through the subject-matter of some of the selections.

ERNEST HANES

Technical information regarding textiles.—The manufacture and sale of ready-to-wear clothing and textile fabrics are of importance, not only to merchants, but also to consumers. There appears to be a desire among women in general for information concerning true values in materials suitable for the various needs in clothing and in the decoration of the home. Many women are incapable of identifying even the more staple fabrics and need the help and

[1] *One-Act Plays for Secondary Schools.* Selected and edited by James Plaisted Webber and Hanson Hart Webster. Boston: Houghton Mifflin Co., 1923. Pp. xii+308. $1.40.

honest judgment of salespeople who can give intelligent information concerning the stock which they offer.

Elizabeth Dyer[1] has attempted to supply a practical guide for the purchasing public and a source of textile knowledge for those who sell. It is for the latter that the book is primarily intended, as a reference and a text.

The author gives a somewhat detailed description of the processes involved in textile manufacture and the factors influencing qualities and costs. This discussion is followed by a section devoted to defining in an encyclopedic manner a most extensive list of textiles. While illustrative cuts and diagrams are rather noticeably lacking, the descriptions are given in such a clear and direct way as to make them interesting and valuable to high-school girls as well as to salespeople and women who purchase.

The author has admirably endeavored to confine herself to a consideration of the fundamental principles governing the cost of production and beauty, suitability, and becomingness and has tried to summarize and advise in the chapter entitled "Selection of Clothing." The first twelve chapters are valuable as a source of rather direct and specific guidance concerning the purchase of clothing and textiles, and the last chapter emphasizes the purpose of the book, which is to teach salesmanship in a very brief space.

No treatment of any length of the subject of textiles can wholly overlook some consideration of their historical significance. The historical material given is exceedingly brief though rather interestingly written. The greatest contribution of this book to public-school or private-school teaching is to be found in its technical information concerning the manufacture, qualities, and identification of textiles.

HAZEL SCHULTZ

High-school algebra.—A serious attempt to put into actual practice many of the principles and suggestions made by the National Committee on Mathematical Requirements in its summary report has been presented in the form of a textbook on algebra.[2]

The authors appreciate the fact that in addition to algebra other phases of mathematics must be introduced in the ninth year. Thus there appears in this text a small amount of intuitive geometry and a brief chapter on the trigonometry of the right triangle. No consideration is given to demonstrative geometry. Arithmetic is provided for by emphasis on evaluation and checking by substitution.

The topics are so arranged that a minimum-essentials course to be mastered by all pupils and a long list of supplementary topics to be taken up by the

[1] Elizabeth Dyer, *Textile Fabrics*. Boston: Houghton Mifflin Co., 1923. Pp. xiv+352. $1.75.

[2] Webster Wells and Walter W. Hart, *Modern High School Algebra*. Boston: D. C. Heath & Co., 1923. Pp. x+466.

brighter pupils are available for the instructor. The work in the minimum-essentials course is supposed to be sufficient for three semesters and to contain all of the algebra topics recommended by the National Committee on Mathematical Requirements as desirable in a first course.

There is some use of formulas and graphing. Interest is added by the insertion of brief historical footnotes throughout the text. At the end of the book there are listed several time-tests for the use of the teacher and numerous definitions, formulas, and processes of which the pupils are expected to have complete mastery at the end of the course.

The authors have taken a step toward making algebra more vital to the secondary-school pupil. It is very commendable that textbook writers are coming to include branches of mathematics other than algebra in the work of the first year of the high school. However, it is to be deplored that some of the subjects, such as the trigonometry in this text (chap. xxvi), have been included as optional material rather than as required subject-matter. Such procedure suggests to the instructor the omission of the optional material and reduces the first-year course to the pure algebra work it has always been.

WALTER A. HEATH

Laboratory studies in physics.—In the revision[1] of the 1913 edition of N. H. Black's laboratory manual in physics, one finds the number of exercises increased from fifty to sixty-five. There is accordingly greater possibility of adapting the new manual to local conditions and to different courses in physics.

Three new features of the manual should come to the attention of physics teachers. The first is the use of introductory paragraphs for each experiment. These attempt to show the relation of the experiment to the subject under study and to give significance to the experimental work. The second is the inclusion of many optional experiments for meeting individual differences in interest and ability. The third is the list of questions and problems at the end of each experiment for the purpose of reviewing the essential points.

Interspersed with the traditional experiments commonly found in physics manuals is a considerable number of worth-while "everyday practical experiments." In view of the directions for and the form of experimental procedure, the excellent tables in the Appendix, and the new features, the manual may be considered a distinct step toward bett[illegible] laboratory practice. The fact that it has been used in the classroom for several years adds greatly to its instructional values. Every physics teacher will find in it profitable suggestions.

CHARLES J. PIEPER

[1] N. Henry Black, *Laboratory Experiments in Practical Physics*. New York: Macmillan Co., 1923. Pp. x+242.

A flexible system of cookery.—Something unique is to be found in a *Card Text System of Cookery*[1] which has just appeared. It consists of an enameled metal or paper container and a set of indexed cards giving information relative to nutrition and cookery.

The introductory card carries a definition of the various types of foodstuffs and lists of foods arranged according to their chief content. To a cook unfamiliar with nutritive values, this should prove a help in balancing the diet.

The organization of the many good recipes under twenty-four headings has solved the complex problem of nutrition very satisfactorily. The recipes are good in that they are adapted in cost to the average family, with some suggestions of more luxurious fare. With but few exceptions, the information concerning the quality and the digestibility of various foods found on the first card of each division is scientifically correct and again is a very helpful feature for the cook untrained in scientific methods.

Since knowledge of the calory values of food has become such an important study in even the popular handling of the diet for those overweight or underweight, one is disappointed at finding no mention of these values.

The metal container is of sturdy construction but would be more convenient were the front cut down below the level of the index tabs. The cards are of good quality, and the printing is good. Space is allowed for additional recipes to be filed under the various headings.

This set should be helpful in a school course in that it presents systematically many good recipes. The information given, however, is too meager to represent a well-rounded course in cookery. It is to be praised as being a usable method of introducing into the home a scientific attitude toward the important business of feeding the family.

MATA ROMAN

More facts about France.—There was a time when a new French text was considered entirely adequate if it succeeded in clarifying certain principles of linguistic structure. Today this will not suffice. The demand for facts about France presented through the medium of idiomatic French containing a certain stylistic excellence is unmistakable. Such recent titles as *La Nouvelle France, Paris d'Aujourd'hui, La France Eternelle, La France Nouvelle,* and *A Travers la France* furnish abundant evidence of the new order of things. It is therefore most gratifying to welcome a text[2] which not only satisfies this new demand but also contains a quality of French that is decidedly refreshing because it is drawn from the actual language that the Frenchman uses today to express his thoughts—a language in striking contrast with the archaic and colorless thing which passes for French in some of our most widely used texts. In fact, in the Preface the author states definitely that it is his purpose to make an attractive and effective combination of the most important idioms of the language.

[1] Helen I. Borrowman, *Card Text System of Cookery.* Milwaukee, Wisconsin: Bruce Publishing Co., 1923.

[2] Jean Leeman, *Paris Pittoresque.* Chicago: Allyn & Bacon, 1923. Pp. viii+198. $1.20.

In appearance, the book is identical with a score of other volumes sponsored by its publishers. It consists of thirty lessons, a chapter on orthographical modifications and "Tolerances," and English-French and French-English vocabularies. The lessons are uniform in structure in that they contain first a page or so of interesting, attractive, and highly idiomatic French, each dealing with a different aspect of Paris or Parisian life. Among the subjects treated are *ma première promenade dans Paris, une excursion sur la Seine, L'Opéra Faust, La Chambre des Députés, les cris de Paris, Fontainebleau,* etc. The author is, indeed, to be commended for his choice of subjects. Immediately following the French section, there is a list of the principal idioms employed in the French passage with their English equivalents. As these idioms are italicized in the French passage, the student knows which ones are new and important and is thus warned that their explanation can be found in the succeeding section. Following this list of idioms there is a questionnaire which forms the basis of oral practice for the assimilation of the material presented. The lesson concludes with a set of English sentences to be rendered into French. The really courageous thing about these sentences is that they are prepared more as a drill in the use of French as a vehicle for the expression of concepts of the mind than as a mere device for acquiring grammatical knowledge. There is, however, no neglect of the latter aspect of the subject, nor need there be any, for these two considerations are not mutually exclusive in spite of the fact that for a long time they have been treated as such.

Paris Pittoresque should surely find a place in the American classroom, for it will fill a definite need. It may be used as soon as the pupils are fairly fluent, which should be toward the end of the second year. At any rate, it is advisable to use this type of text as soon as the pupils are capable of appreciating the excellent quality of the French. The author is to be heartily congratulated on having the courage to present for classroom use a series of vivid excerpts from the language as it is actually spoken in Paris today.

ARTHUR GIBBON BOVÉE

Practical instruction in citizenship.—If the steady stream of civics textbooks may be accepted as a basis of estimation, the emphasis on citizenship instruction has resulted in the wide introduction of civics courses in our high schools. Another new textbook[1] purports to emphasize the practical side of training in citizenship.

The book is divided into seven parts: "Public Welfare," "Public Safety," "Public Utilities," "Public Improvements," "Public Provision for Education," "Financing the Community," and "The Organization of Government." The twenty-two chapters of the text are divided among the seven parts with an unequal allotment of from one to five chapters to each part. "A Foreword to the Teacher" sets up certain aims and offers suggestions for classroom pro-

[1] Ella Cannon Levis, *Citizenship: A Practical Textbook in Citizenship.* New York: Harcourt, Brace & Co., 1923. Pp. xxii+470.

cedure. Each chapter contains an "Introductory Lesson Plan," "Subjects for Reports and Debates," "Questions," and "Supplementary Materials."

The organization of the text lacks unity and proportion. An excessive amount of space is given to a discussion of health in its several aspects, and this treatment is scattered through parts of five chapters. On the other hand, the limited discussion of such topics as the family, immigration, and political parties seems unjustifiable. The content is encyclopedic in character; many pages contain masses of detailed facts which have little or no educational value for junior high school pupils. Many of the chapter sections are too short to serve adequately as lesson units. The point of view is governmental, with scant treatment of the economic and sociological phases of the topics presented. A particularistic development of governmental agencies and their functions assumes almost the prominence of a central theme in certain parts of the text.

The pedagogical aids are, on the whole, conventional and will be of little value to the well-trained teacher. Some of the suggested lesson plans are impracticable from the point of view of the reviewer. Most of the questions call for facts, not for the use of facts, while many of the topics for reports and debates imply the use of content materials beyond the comprehension of the average pupil in the junior high school. The reference lists include mainly publications and reports issued by the government and social-service agencies and textbooks many of which are suitable for use only by college students. Many pictures are used; some of these, however, lack clarity of outline. The format of the book is commendable.

W. G. KIMMEL

History of practical arts education.—The entrance of manual training into the field of education and its subsequent development is a part of the history of education in America about which very little has been written. The extent to which practical arts instruction has become a part of our traditional educational program warrants a clearer statement of its history than has hitherto been made. This demand has been met in part in a recent government bulletin[1] which presents the history of the first institution to be identified with manual training in secondary education. One learns many interesting facts about the early conceptions of manual training, its purposes, aims, and progress in the early eighties, and of the trials and aspirations of its sponsor, C. M. Woodward, as one reads through this timely publication.

Although the bulletin centers about the founding, history, and administration of the Manual Training School of Washington University at St. Louis, Missouri, its significance as a historical document is far-reaching. Mr. Coates has given the field of practical arts education a bit of source material that has historical significance beyond the limits of a single institution. In short, a background is presented out of which developed not only the school at

[1] Charles Penney Coates, *History of the Manual Training School of Washington University*. Bureau of Education Bulletin No. 3, 1923. Washington: Bureau of Education. Pp. 86.

St. Louis but many other institutions and, more important than that, the idea of manual arts instruction as a part of the scheme of general education in both the elementary school and the high school. For the general student of education the bulletin offers some very valuable information about manual arts education, and for those closely connected with this type of instruction it contains a body of historical data which has been sought for some time.

ROBERT WOELLNER

A common-sense treatment of mental measurement.—Another attempt to dispel the haze about the pertinent question of measuring intelligence is evidenced in the recent educational monograph[1] by Harlan Cameron Hines, of the University of Washington. Recognizing that "the measurement of intelligence and its development is one of the most promising intellectual activities within the educational corps" (p. viii) and, further, that educational determinism and educational democracy have not yet been reconciled, we welcome this understanding analysis of the movement.

"The purpose of this volume is to present a brief résumé of the aims, principles, problems, and progress of the measurement of intelligence" (p. ix). Recognizing both the good and the harm which have been accomplished in the use of intelligence tests, the author attempts to "strike a balance between the enthusiasts on the one hand and the ultraconservatives on the other" (p. xi). Both sides are fairly represented, and the fallacy of the extremists' position is described. The lack of perfection in the instruments of measurement now available and the lack of agreement on the thing measured are both treated at length, together with a consideration of the limitations to be placed on conclusions drawn from the scores secured by means of these imperfect instruments.

Summarizing a number of definitions of intelligence, the author states, "Intelligence is the capacity (native ability plus training) of an individual to adapt himself to a new situation" (p. 11). The measurement of intelligence and its relation to present-day progress in education is treated under the eight following chapter headings: "The Meaning of Intelligence," "Instruments for Measuring Intelligence," "The Use of the Instruments," "What Is Tested and What Is Not Tested," "The Difficulties of Standardization," "Values Accruing from the Measuring Processes," "The Measurement of Intelligence and the Aims of Education," and "The Measurement of Intelligence and Democracy in Education." A well-selected group of references accompanies each chapter. The monograph is justly stated to be "a volume of small dimensions and large compass which will tell what ought to be commonly known about the most important single movement in our current educational life" (p. ix.)

PAUL M. COOK

[1] Harlan Cameron Hines, *Measuring Intelligence.* Boston: Houghton Mifflin Co., 1923. Pp. xii+146.

School health work.—The health of school children is receiving much attention at the present time, and rightfully so, in order that vigorous bodies and sound minds may be developed during the school period. Ideas regarding school health work are rapidly changing, and numerous publications relating to the subject are appearing.

According to the report of the Advisory Committee on Health Education of the National Child Health Council,[1] school health work is divided into seven parts: health training and instruction; physical-training activities as related to health; health supervision of children and teachers—subdivided into health inspection, examinations, and correction; preparation of teachers for health training and instruction; the hygienic arrangement and administration of the school program; mental hygiene; and the hygiene of the school plant. The importance is shown of having the school co-operate with the home and the community in carrying out the health program. The fundamental principle is set forth that "the aim of health training and instruction should be to assure healthful living by (1) the formation and practice of habits essential to health, (2) the acquisition of knowledge necessary to health, and (3) the development of right attitudes and ideals with regard to health, both physical and mental" (p. 15). Various topics and projects are suggested for use in health teaching. Hygiene is defined as "the study of the life of the individual in relation to health," and sanitation as "the study of one's surroundings in their relation to health" (p. 32). In accordance with modern views, this statement is made: "Children should be graded with careful regard to the stage of mental and physical development which they have reached, regardless of their age in years" (p. 55). Mental hygiene is defined as follows: "Mental hygiene concerns itself with the prevention of mental disorder and the encouragement of a well-balanced and serene mind capable of adjusting itself to the mastery of life's problems with a maximum of skill and freedom from mental strain" (p. 67).

As stated in the Introduction, the report is intended not to give "inspirational guidance" but to show the elements of a program, thereby helping community leaders to see whether their school health work is balanced and sound. Published in brief and concise form, the report should be of value, not only to the teaching profession, but to others working with, and interested in, children.

CARTER V. GOOD

Contemporary poetry.—Much of our contemporary poetry, beautiful as it is, is not suitable for presentation in the high school because of the immaturity of the pupils. Instructors have long felt the need of an anthology of modern poetry selected by teachers in secondary schools with the interests of their pupils clearly in mind. Such an anthology is that produced by two instructors

[1] *Health for School Children.* School Health Studies, No. 1. Washington: Bureau of Education, 1923. Pp. 76.

in the high schools of New York City.[1] The authors explain in the Preface that their inspiration and much of their material came from anthologies compiled by the pupils in their classes from volumes and magazines assigned to them in a term project. Hoping that poems selected in such fashion might satisfy the tastes, and waken the interests, of other high-school pupils, the authors gathered them together for publication.

In addition to 347 poems from modern British and American poets, there are ninety pages of suggestions to teachers and pupils called "Studies in Poetry." These suggestions are brief indications of lines of thought arranged to develop appreciation of poetry. At the end of each lesson is a valuable list of "Correlated Readings Chiefly from the Older Poets." Such lists make possible the use of the anthology as an introduction to a study of the classics. The book contains an excellent bibliography of modern poetry, several pages of biographical notes, and a very useful list of "Musical Settings of Modern Lyrics."

The reviewer recommends the book highly. The poems show careful selection. They are grouped by subject-matter under such headings as the following: "Nature," "The City," "People," "Experience," "Love and Friendship," etc. In its emphasis on the poetry rather than on the poets and in its disregard for chronological order, the book is a decided contribution to the teaching of English in secondary schools.

MARTHA JANE MCCOY

Junior high school.—There is probably no phase of the reorganization of our system of public schools that has received more attention or impetus in the last decade than the junior high school movement. In fact, changes have taken place so rapidly and the new organization of the seventh, eighth, and ninth grades has been adopted so enthusiastically that severe criticism has been directed against the superficial changes in the form of organization which have characterized the too hasty and enthusiastic approval of the junior high school program by many communities. As an aid to a careful appraisal of the difficulties encountered as well as of the advantages secured in adopting the new type of school, a bulletin[2] of the United States Bureau of Education, describing the development of junior high schools in Berkeley, California, fills a distinct need.

A careful statement of the community problems out of which the need for reorganization grew is followed by a statement of the development of the junior high school from the first authorization in 1910 to the occupying of new plants at various periods during the decade. More than one-third of the

[1] Margery Gordon and Marie B. King, *Verse of Our Day*. New York: D. Appleton & Co., 1923. Pp. xxx+482.

[2] James T. Preston, W. B. Clark, H. H. Glessner, and D. L. Hennessey in co-operation with H. B. Wilson, *Junior High Schools of Berkeley, California*. Bureau of Education Bulletin No. 4, 1923. Washington: Bureau of Education. Pp. 48.

bulletin is given to a description of the subject-matter offered, while a very helpful final chapter describes the "School Counseling Program" which has been accepted as such an important part of the vocational guidance and vocational training of the junior high school.

While the absence of any record of the use of standard tests in measuring the efficiency of instruction seems a defect in this age of testing, the description of the development and actual functioning of this new type of organization in a city with a population of 60,000 cannot but be helpful and suggestive to those who are actually facing practical problems in the organization and administration of junior high schools.

ELAM J. ANDERSON

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GENERAL EDUCATIONAL METHOD, HISTORY, THEORY, AND PRACTICE

BELTING, PAUL E. *The Community and Its High School.* Boston: D. C. Heath & Co., 1923. Pp. 372.

FREEMAN, FRANK N., and DOUGHERTY, MARY L. *How to Teach Handwriting.* Boston: Houghton Mifflin Co., 1923. Pp. vi+306. $1.80.

GROVES, ERNEST R. *Personality and Social Adjustment.* New York: Longmans, Green & Co., 1923. Pp. x+296. $1.40.

HARTMAN, GERTRUDE. *Home and Community Life.* New York: E. P. Dutton & Co., 1923. Pp. x+200. $3.00.

KILPATRICK, WILLIAM HEARD. *Source Book in the Philosophy of Education.* New York: Macmillan Co., 1923. Pp. viii+366.

MCNAIR, GEORGE HASTINGS. *Methods of Teaching Modern Day Arithmetic.* Boston: Richard G. Badger, 1923. Pp. xviii+420.

Report of the Survey of Accounting and Business Systems of the School Districts in New Jersey. Trenton, New Jersey: State Department of Public Instruction, 1923. Pp. 46.

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BOOKS PRIMARILY FOR HIGH-SCHOOL TEACHERS AND PUPILS

BLACK, N. HENRY. *Laboratory Experiments in Practical Physics.* New York: Macmillan Co., 1923. Pp. x+242.

BOAS, RALPH PHILIP, and HAHN, BARBARA M. *Social Backgrounds of English Literature.* Boston: Atlantic Monthly Press, 1923. Pp. xii+338. $1.65.

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DAVIS, KARY CADMUS. *The New Agriculture for High Schools.* Philadelphia: J. B. Lippincott Co., 1923. Pp. iv+494. $1.80.

FITE, EMERSON DAVID. *The United States.* New York: Henry Holt & Co., 1923. Pp. xiv+502. $1.68.

LAVISSE, ERNEST. *Histoire de France.* Edited by Alexander Green and René Vaillant. Boston: D. C. Heath & Co., 1923. Pp. x+374. $1.52.

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PARGMENT, M. S. *La France et Les Français.* New York: Macmillan Co., 1923. Pp. xii+372.

PENMAN, JOHN SIMPSON. *The Irresistible Movement of Democracy.* New York: Macmillan Co., 1923. Pp. xii+730. $5.00.

Representative English Essays. Selected and arranged by Warner Taylor. New York: Harper & Bros., 1923. Pp. xvi+500.

SMITH, HARRY B. *Industrial History.* New York: Macmillan Co., 1923. Pp. xii+306.

TAINTOR, SARAH AUGUSTA. *Training for Secretarial Practice.* New York: McGraw-Hill Book Co., Inc., 1923. Pp. xii+298.

PUBLICATIONS OF THE UNITED STATES BUREAU OF EDUCATION AND OTHER MATERIAL IN PAMPHLET FORM

GESELL, ARNOLD, and ABBOT, JULIA WADE. *The Kindergarten and Health.* Health Education No. 14. Washington: Bureau of Education, 1923. Pp. 38.

Growing Healthy Children. School Health Studies No. 4. Washington: Bureau of Education, 1923. Pp. 36.

Health of the Family. Bulletin No. 86. Home Economics Series, No. 8. Washington: Federal Board for Vocational Education, 1923. Pp. viii+304.

ODELL, CHARLES W. *Provisions for the Individual Differences of High School Pupils.* University of Illinois Bulletin, Vol. XXI, No. 4. Educational Research Circular, No. 22. Urbana, Illinois: University of Illinois, 1923. Pp. 16.

OTIS, ARTHUR S. *Otis Classification Test.* Yonkers-on-Hudson, New York: World Book Co., 1923.

Recent issues of the Bureau of Education:

Bulletin No. 30, 1923—*An Americanization Program.*

Bulletin No. 31, 1923—*Americanization in the United States.*

Bulletin No. 33, 1923—*Educational Hygiene.*

Bulletin No. 39, 1923—*Consolidation and Transportation Problems.*

Bulletin No. 40, 1923—*Report of a Survey of the State Institutions of Higher Learning in Kansas.*

MISCELLANEOUS PUBLICATIONS

The Boy's Book of Verse. Compiled by Helen Dean Fish. New York: Frederick A. Stokes Co., 1923. Pp. xviii+406. $2.00.

CORDIER, A. H. *Birds: Their Photographs and Home Life.* Philadelphia: Dorrance & Co., Inc., 1923. Pp. 248.